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DOCUMENT RESUME

ED 263 913 IR 011 943

TITLE MicroSIFT Courseware Evaluations [Set 15 (362-388) and Set 16 (389-441), with an Index Listing the Contents of Each Set (Sets 1-16) and a Cumulative Subject Index (Sets 1-16)].

INSTITUTION Northwest Regional Educational Lab., Portland, Oreg.

PUB DATE Nov 85

NOTE 175p.; For previous documents in this series, see ED 226 765, ED 234 722, ED 239 606, ED 245 666, ED 249 918 and ED 260 710. These two sets are the last evaluations by MicroSIFT to be published in this format.

PUB TYPE Reference Materials - Directories/Catalogs (132)

EDRS PRICE MF01/PC07 Plus Postage.

DESCRIPTORS *Computer Assisted Instruction; *Courseware; *Educational Games; Evaluation Criteria; Instructional Materials; *Microcomputers

IDENTIFIERS Computer Games; Courseware Evaluation; *Courseware Reviews; *MicroSIFT

ABSTRACT

This document consists of 80 microcomputer software package evaluations prepared by the MicroSIFT (Microcomputer Software and Information for Teachers) Clearinghouse at the Northwest Regional Education Laboratory. Set 15 consists of 27 packages; set 16 consists of 53 packages. Each software review lists producer, time and place of evaluation, cost, ability level, subject, topic, transfer medium, required hardware and software, preview policy, instructional purposes and techniques, available documentation, instructional objectives and prerequisites, content and structure, estimated student time required, potential uses, major strengths and weaknesses, and additional comments. An evaluation summary rates each package on 21 criteria. The titles in Sets 15 and 16 are as follows: Addition Circus; Algebra Series; Alphabet Harvey; Content Area Reading--Literature; Crypto Cube; Decimals--Multiplication and Division; Fay's Word Rally; Food for Thought; Fraction Fun with Fraction Man; The Grammar Examiner; Language Arts--Parts of Speech; Math Maze; Mathematics--Grade 3; Mathematics Activities Courseware--4; Mathematics Activities Courseware--7; Mathsheet; More Powers to You!; Myths, Magic and Monsters; Play on Words; Political Genie; Spellakazam; Spellicopter; States; States and Capitals; Supermind; Typing; Verbs--Action/Linking Verbs; 4-H Ding Darling Soil, Water, Wildlife Project; The ABC's of Programming Your Apple; Arith-Magic II; The Basics of BASIC; Biology Challenge; Brain Booster; Computer Science I; Cosmic Carnival; Countdown, Test Simulator, Authoring and Management System; Discover--A Science Experiment; Earth Science Series--Ground Water; Earth Science Series--Hydrologic Cycle; Earth Science Series--Moisture in the Atmosphere; Earth Science Series--Surface Water; Food Group Puzzles; Galactic Prospector; Graphical Analysis II; GUIDEMASTER Borrowing--Regrouping for Subtraction; Holt Reading Skills Extender 3; Hometown; How a Bill Becomes Law; How to Weigh an Elephant; Internal Journey; Law in American History; The Magic Cash Register; Math Power Program--Whole Numbers; Math Worlds--Exploring Math with Computers; Microcourse Mathematics--Solving Story Problems--Whole Numbers, Levels 3-6; Modeler--Molecular Design Editor; Operation Frog; PAVE--Perpetual Accuracy/Visual Efficiency Training; Physical Science Databases for PFS: File; Problem Solving in Algebra; Proportions and Per Cents; QuizWhiz; Relevant Reading Through Science I, II, III, and IV; Science Trivia Challenge; Scrambled Eggs; Secrets of Science Island; Shark Attack!--Math Series; States and Traits; Solar Reading--Flight 1--Central Thought; Sorting Techniques, I, II; Stickybear Spellgrabber; Story Tree; Subject-Verb Agreement; U.S. History Databases for PFS: File; The Voyage of the Mimi--Ecosystems with Island Survivors; The Voyage of the Mimi--Whales and Their Environment with the Bank Street Laboratory; What's My Logic?; WordMath; The Writing Workshop; and You Are What You Eat. Also included are an index listing and cumulative subject index for MicroSIFT Sets 1-16. (JB)

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MicroSIFT COURSEWARE EVALUATIONS.

[Set 15 (362-388) and Set 16 (389-441), with an Index Listing of the Contents of Each Set (Sets 1-16) and a Cumulative Subject Index (Sets 1-16)].

November 1985

Northwest Regional Educational Laboratory (NWREL)
300 S.W. Sixth Avenue
Portland, OR 97204

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Addition Circus

VERSION: Apple

PRODUCER: Gamco Industries, Inc.
Box 1911
Big Springs, TX 79721

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $39.95

ABILITY LEVEL: Grades 1 and 2
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, single disk drive, monitor. Also available for the Commodore 64 and TRS-80 Model III and IV.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To offer practice for students in addition with the levels for sums to 6, sums to 10, sums to 12, and sums to 18.

INSTRUCTIONAL PREREQUISITES: (INFERRED) A basic knowledge of addition facts up to 18.

CONTENT AND STRUCTURE: Balloons containing addition fact problems float upward in the sky. A correct answer allows a clown to pop a balloon before it hits the circus tent. There are two sections of TEACHER MANAGEMENT:STUDENT MANAGEMENT and PROGRAM MANAGEMENT. STUDENT MANAGEMENT enables you to display, print, or delete the student files stored on the disk. PROGRAM MANAGEMENT enables you to adjust the playing time, the sound (Apple and Commodore 64), the difficulty level, the speed, and the highest recorded score for the game.

ESTIMATED STUDENT TIME REQUIRED: Ten minutes per session. The number of sessions depends on the student's interest and skill level.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
		•			Purpose of package is well defined.
				•	Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
				•	Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 3, Technical Characteristics - 4.

Northwest Regional Educational Laboratory
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(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Addition Circus, continued

POTENTIAL USES: This package can be used as reinforcement for completed assignments. Students can work independently and try to beat their score or compete in pairs or small groups. Older elementary students needing remediation may also enjoy the program even though the clown is childish for them.

MAJOR STRENGTHS: The package is fun to use and motivating. Student information can be stored on the disk and printed. Teachers can adjust many variables in order to individualize instruction. The management system allows up to 200 student files. If a wrong answer is entered, the game stops for a few seconds and shows the student the correct answer. Students are shown their score at the end of each game.

MAJOR WEAKNESSES: The reading level of the directions is too difficult for intended users. Students can't exit the game until the time runs out.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Algebra Series

VERSION: Apple

PRODUCER: Microcomputer Workshops
225 Westchester Avenue
Port Chester, NY 10573

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $24.95 each package; 6 packages in series

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Mathematics
TOPIC: Algebra
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe, or IIc, single disk drive, monitor. Also available for Commodore 64, Commodore PET, TRS-80 Models I, III, or IV, Atari, and IBM-PC and PCjr.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability levels, instructional objectives, program operating instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To facilitate learning complex algorithms.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: Each package in the series contains one diskette and a User's Guide. There are 6 packages in the series: all are available individually as well as part of the series. The programs in this series were designed to simulate the step-by-step instructions taught in the classroom in order to facilitate learning of complex algorithms which many students have trouble mastering. Errors are flagged immediately and explained. Complete error analysis is given after each problem and at the end of each set.

EQUATIONS randomly generates equations in the form AX+B=C, where A, B, and C are integers. All solutions are integer values.

BINOMIAL MULTIPLICATION. In this program, students are given practice multiplying two binomials, in the form (ax+b)(cx+d), where a, b, c, and d are integers. All problems are generated randomly. The student uses the screen as a worksheet, entering the product one term at a time. Similar terms are then combined. If the student is unable to perform the multiplication properly, the program branches to a tutorial

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
			•		Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) or 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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Algebra Series, continued

where the FOIL method of binomial multiplication is explained.

GRAPHING LINEAR FUNCTIONS. Using the screen as a worksheet and graph paper, the student is able to practice graphing a linear function in the form AX+BY=C, (or some other variation of that form). The program randomly generates a linear function and guides the student into setting up a chart consisting of three ordered pairs that are solutions to the given equation. The student must pick a value for "X" and then find the corresponding "Y" value. Once three points (ordered pairs) have been chosen, a coordinate axes appears on the screen. Using certain keys, the cursor is moved to the position representing a point on the line. After the three points have been correctly placed, a line connecting these points is drawn.

SOLVING QUADRATIC EQUATIONS generates random quadratic equations in the form $AX^2+BX+C=0$ that are solvable by factoring. The student solves the equation by factoring the quadratic expression, setting both factors equal to zero and solving the resultant equations for both values of X. If the student is unable to factor the quadratic expression, a detailed explanation of the factoring process is given for that particular problem. The screen is used as a worksheet and the student interacts with the computer as the problem progresses.

FACTORING ALGEBRAIC EXPRESSIONS generates factorable algebraic linear and quadratic expressions for the user to factor. Using the left and right arrow keys, the student moves the cursor back and forth between the parentheses, entering the factors or parts of factors in any sequence. Once the factors have been entered, the student may test the result by pressing the return key. The computer multiplies the factors entered and shows the result. If the student is unable to factor the expression, help may be obtained. The program then switches to a mode in which as each part of a factor is changed, the product is immediately changed on the screen. This allows the student to experiment on a trial and error basis until the correct solution is found. If the student is still unable to factor the expression, he/she may branch to a tutorial that explains the procedure in a step-by-step manner. Complete error analysis after each problem and at the end of each set is provided.

SIMULTANEOUS LINEAR EQUATIONS generates random simultaneous linear equations that are solvable by addition or subtraction. All solutions are integers and all numbers involved in the operations are such that work may be done on the screen without need for paper and pencil. If no terms containing one of the variables can be cancelled by addition or subtraction, the student must multiply or divide one or both equations by factors that will produce a cancellation. The student must then add or subtract the two equations, producing a linear equation containing one variable. Using substitution, the student solves for the other variable. The final step checks that both solutions are correct, verifying both equations by substitution. The program then shows a graphic representation of the solution as the intersection of the two lines representing each equation. This allows the student to see the connection between the algebraic and graphic solution.

ESTIMATED STUDENT TIME REQUIRED: Each program ranged between 20 and 30 minutes, but they could be used more often and for longer periods of time if needed.

POTENTIAL USES: This program provides review of specific algebraic concepts. It could be used as either review or reinforcement.

MAJOR STRENGTHS: The subject areas chosen are the key ones in Algebra with which students usually need a lot of help. The students enjoyed using the program, and the students who needed reinforcement in the steps to solve the problems increased their skills. The analysis of the types of errors was helpful when someone was there to make use of the information, or when the student relayed it to the instructor. The ability to chose

Continued

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Algebra Series, continued

a difficulty level and the number of problems to be worked allowed the students to feel they were in control of the computer. The ability to skip the instructions or quit after each problem is also helpful. Most of the programs allowed the student to do the problem several different ways and to make the choice as to what to do next. The programs were also designed to accept different steps that result in the same answer. The graphics used for the problems and the graphing were very good and displayed the information effectively.

MAJOR WEAKNESSES: The biggest weakness is also an asset: the programs are highly structured to provide a sequential solution to the problems, but that can be detrimental also. After factoring you can't simplify, you must simplify first (Solving Quadratic Equations). Binomial Multiplication accepts numbers only in the standard form, i.e., x4 is not acceptable but 4x is; 4yx is accepted but changed to 4xy with no explanation. In Simultaneous Linear Equations the student can get caught in a loop if they choose 1 and don't want to multiply there is no way out of the loop unless they decide to multiply by -1 to get only the signs changed. You are required to have integer coefficients which may be limiting in the solution that the student sees. Searching for keystrokes on the menu may cause problems for the students. There is no support material provided.

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Alphabet Harvey

VERSION: Apple

PRODUCER: Intellectual Software
798 North Avenue
Bridgeport, CT 06606

MARKETING: Queue, Inc.
5 Chapel Hill Drive
Fairfield, CT 06432

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $39.95

ABILITY LEVEL: Kindergarten through Grade 9
SUBJECT: Language Arts
TOPIC: Alphabetizing
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach alphabetical order and vowel recognition. To develop the alphabetizing skills necessary to use the dictionary successfully. To strengthen sequencing skills and develop the ability to visualize spacial relationships.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette and a 4-page Teacher's Manual. Alphabet Harvey is a multi-level alphabet game designed to strengthen students' alphabetizing skills. There are 10 levels in all. The user chooses the level and the amount of time allowed for giving an answer (1-60 seconds).

ESTIMATED STUDENT TIME REQUIRED: The program could be used in 10-minute segments until mastery has been achieved. The different formats and different reaction times would allow the program to be used many times.

POTENTIAL USES: The program could be used for drill and practice with one person per machine.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
		•			Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
		•			Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evalu s indicated they would not use or recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 1, Instructional Characteristics - 1, Technical Characteristics - 1.

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(503) 248-6800

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Alphabet Harvey, continued

MAJOR STRENGTHS: The different formats of alphabetizing and the ability to set the reaction time are good features.

MAJOR WEAKNESSES: There is too much reading for the intended audience. The directions should be easily bypassed, if desired, and reaccessed when needed. Too much time is taken in the reading of all the directions, even if the program has been used before. Too much negative reinforcement is available to the student in the form of frowns and sound. The program is also probably too noisy for most classroom situations. The program seems to freeze if you do not answer correctly within the time frame (for example, if you stop interacting with the program it will give you a few problems and then the screen freezes). There are no prompts to tell the person to press a key to continue. If a person answers "no" when asked if they want to continue, the screen freezes.

OTHER COMMENTS: An I/O ERROR BREAK IN 5024 came up several times. Evaluators tried to replicate the problem but were not able to. It seemed to happen when time was allowed to run out.

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Content Area Reading: Literature

VERSION: Apple

PRODUCER: Gameco Industries, Inc.
Box 1911
Big Springs, TX 79720

EVALUATION COMPLETED: May 1985 by the staff and constituents of Oregon Total Information Systems (OTIS), Eugene, Oregon.

COST: $39.95

ABILITY LEVEL: Grades 5 through 12
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor. Also available for 48K TRS-80 Models III and IV, and Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ablity level(s), program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: To show how different reading skills can be used to effectively comprehend particular content area materials.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette, and a 7-page User's Guide.

ESTIMATED STUDENT TIME REQUIRED: After an overview on how to "read" literature. There are five stories of about 250 words on which 10 questions are based. Each would take 10-15 minutes.

POTENTIAL USES: This package could be used in a reading or literature class for comprehension, especially for higher level thinking-inference skill instruction.

MAJOR STRENGTHS: The program teaches students to think. It gives good reinforcement information/practice. A teacher management program is included. If a certain score is attained, the user is allowed to play a game before proceeding.

MAJOR WEAKNESSES: Student motivation is low. The program is slow, student entry is slow or the program doesn't keep up. The student must often respond several times before the program will move on — very frustrating. There is little use of graphics. The only way out of the program is to start over.

OTHER COMMENTS: This package is very narrow in scope. It has limited value; there are better programs available which teach to the same skills.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
		●			Package achieves defined purpose.
	●				Content presentation is clear and logical.
		●			Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
			●		Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
		●			Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
		●			User support materials are effective.
		●			Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
		●			Computer capabilities are used appropriately.
			●		Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would not use or recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content -3 , Instructional Characteristics - 2, Technical Characteristics - 1.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Crypto Cube

VERSION: Apple

PRODUCER: DesignWare
185 Berry Street
San Francisco, CA 94107

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida, and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grade 2 through Postsecondary
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor, joystick or mouse (optional). Also available for Commodore 64, 64K IBM-PC, IBM-PCjr, and Atari.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To motivate students to spell words correctly.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Second grade reading/spelling level. Students must know the difference between consonants and vowels.

CONTENT AND STRUCTURE: This package contains one diskette, and a 20-page User's Guide. The user uncovers words hidden behind the squares on the four-sided rotating cube. It includes 1,000 words organized by topic. The vocabulary levels range from age 8 to adult. A built-in puzzle generator lets you continuously create new puzzles with built-in words or words you add to the program. Sound effects and animation are included. When you uncover all the words on each side, the wuzzle does a song and dance for you. The game is intended for one or two players.

ESTIMATED STUDENT TIME REQUIRED: Thirty to sixty minutes per game depending on prior familiarity with the word list.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 5, Technical Characteristics - 5.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Crypto Cube, continued

POTENTIAL USES: The package could be used for reinforcement of previously taught concepts. It appeals to a wide range of age levels and types of students, e.g., ESL. It can be used to practice current vocabulary, or to introduce vocabulary in a new subject.

MAJOR STRENGTHS: The graphics and sound effects add to the program's motivational appeal. The initial demonstration is a good idea. The documentation on the screen is excellent. There is very little typing involved, so students without typing abilities can succeed. Teachers can enter word lists. The "Things to Do" section in the documentation is good.

MAJOR WEAKNESSES: There is a memory for keys that are pushed. If a student pushes a key accidentally while waiting for the little character to do his routine, the effect will be short-lived.

OTHER COMMENTS: Sound can be turned off.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Decimals: Multiplication and Division

VERSION: Apple

PRODUCER: Gamco Industries, Inc.
Box 1911
Big Springs, TX 79721

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $39.95; with backup $54.95

ABILITY LEVEL: Grades 5 through 8
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor. Also available for 48K TRS-80 Models III and IV, and Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, sample program output, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: (INFERRED)
To practice multiplication and division problems involving decimal fractions.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk and a 12-page User's Guide. It is one in a series of programs which combine guided math drill, an arcade-style reward game, and a student management system. Each disk offers a choice of carefully selected difficulty levels. The computer leads students through the problems step-by-step, checking each response in sequence. After three errors are made, it displays the proper response. At the end of each set of problems, the program places students at a higher difficulty level, the same level, or a lower level, based on the percent correct. The number of problems presented per level is preset at 10, but may be changed by the teacher to any number from 1 to 50. Students are rewarded for good performance with a chance to play an arcade-style game. The student management system automatically records up to 200 student files which include the student's name, difficulty level worked, raw score, and percent correct. The teacher may choose to view, print, or delete all student files or only those of an individual student. There is a choice of three difficulty

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 5, Technical Characteristics - 4.

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Decimals: Multiplication and Division, continued

levels in Multiplication, including problems where zeroes must be annexed to the product before placing the decimal point; a choice of five difficulty levels in Division, from dividing a decimal number by a whole number to dividing two decimal numbers and rounding the answer; and a choice of two difficulty levels in Mixed Operations.

ESTIMATED STUDENT TIME REQUIRED: It is hard to estimate the time needed because the number of questions can be changed by the teacher. The program is time consuming because each step in the multiplication and division process is checked.

POTENTIAL USES: The program could be used individually, or in small groups, to review the steps of multiplying or dividing decimal fractions.

MAJOR STRENGTHS: Use of this package reinforces the correct steps in the multiplication and division processes. The program uses the capability of the computer to check each step in the process. The teacher management section is well-done; it is easy for the teacher to individualize. The student is forced to enter the correct answer, even after the answer is given.

MAJOR WEAKNESSES: Entering a name without the caps lock key down causes the computer to beep at you with no indication of what is wrong. The prompt "Move your decimal point in" (i.e., 0.093), is not clear nor mathematically correct. The computer reaction to input is sluggish. No way is given or was found to escape from the program.

OTHER COMMENTS: Not everyone uses a 0 as the first digit when multiplying the second digit of the multiplier. Teachers cannot set the students on specific lessons.

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Fay's Word Rally

VERSION: Apple

PRODUCER: Didatech Software Limited
810 West Broadway, Suite 549
Vancouver, BC V5Z 4C9
Canada

EVALUATION COMPLETED: July 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon.

COST: $49.95

ABILITY LEVEL: Grades 1 through 5
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II Series, single disk drive, monitor. Also available for Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, instructional management
INSTRUCTIONAL TECHNIQUES: Drill and practice, game, content control

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To supplement reading instruction and provide a motivating method of reinforcing and reviewing sight words, sentence comprehension, vocabulary, and reading skills. To develop hand-eye coordination, spatial awareness, and organizational skills.

INSTRUCTIONAL PREREQUISITES: The appendix of the documentation gives a list of 62 words the student should be able to read prior to using the package. Most all of the words are around the first or second grade reading level.

CONTENT AND STRUCTURE: The package contains one diskette and a 77-page User's Guide. There are four components to Fay's Word Rally: the keyboard tutorial, directions on playing the game, game options, and the game itself. There is also a recordkeeping system and a section for teachers and students to put in their own sets of words and clues. The game is a maze in which 9 words appear. Students read the clue below the maze, find the word that matches and drive a car

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 4.

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Fay's Word Rally, continued

through the maze to the word. When the car arrives at the target word, Fay jumps for joy or waves her rally flags. Once all 9 words are successfully identified, students go on to a new and more challenging set. The challenge is increased by driving faster cars or racing against the clock. The program starts with simple words and clues and the skills needed to play are taught in a step-by-step tutorial. There are 720 target words, based on primary reading series, which are graded into 80 sets of 9 words. Word length and complexity of clues increases as the student progresses through the sets. The location of the words and clues changes each time a set is played. A "Create Your Own Game" option is provided for teachers to insert their own words and clues. Also provided is a record keeping system for up to 40 students.

ESTIMATED STUDENT TIME REQUIRED: Ten to twenty minutes, depending on student's abilities.

POTENTIAL USES: The vocabulary included is based on the GINN 720 reading series (Ginn levels 2-9 for grades 1, 2, and 3). There is also a version available which correlates with the Houghton Mifflin Reading Series for grades 1-3. If teachers use that reading series, this program could help students review and reinforce their sight word acquisition and vocabulary skills. If teachers use another reading program, they can make new lists and clues based on that program's vocabulary. Since the teacher can enter their own vocabulary terms, the package is also applicable for other subjects such as social studies, science, etc.

MAJOR STRENGTHS: The program has a game format which will entice students. The clues used to help students select the correct word encourage reasoning skills (seeing relationships, classifying, recognizing categories) and comparing and contrasting. Students can adjust the difficulty and speed components of the game. Teachers can set up a record keeping system and can author their own words and clues.

MAJOR WEAKNESSES: Lists of words in each set are not provided in the documentation but can be printed. An option to use the up and down arrow keys, instead of A and Z keys, to move the car up and down would be an improvement.

OTHER COMMENTS: An alphabetical list of the target words and their set numbers is provided. Another helpful list would be target words arranged by sets and in alphabetical order.

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Food for Thought

VERSION: Apple

PRODUCER: Marshware, a Division of Marshfilm, Inc.
P.O. Box 8082
Shawnee Mission, KS 66208

EVALUATION COMPLETED: July 1985 by the staff and constituents of Montgomery County Public Schools, Rockville, Maryland, and Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95; Entire series of three packages $101.00

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Health Education, Home Economics, Science
TOPIC: Nutrition
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) The student will gain: knowledge of the five basic food groups; an awareness of the role that the food groups play in establishing healthy eating habits; an understanding of the nutritional content and value of each of the five food groups; knowledge of the recommended number of daily servings of each of the five food groups; knowledge of common foods included in each group and specific information about each.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk and a 14-page Teacher's Guide. This program is a tutorial covering the nutritional value of the five Food Groups, the recommended number of daily servings of each, and interesting facts and information about several foods in each group. Also on the disk is a 20-question quiz, and a Teacher Management System that records student responses to the quiz.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
•					Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 3, Technical Characteristics - 3.

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Food for Thought, continued

ESTIMATED STUDENT TIME REQUIRED: Each food group takes ten to fifteen minutes: quizzes take fifteen minutes or more.

POTENTIAL USES: This package could be used for background information for a nutrition unit. Otherwise it should be used as a remediation tool.

MAJOR STRENGTHS: The materials seem accurate and timely. The program gives very positive reinforcement. Directions are clear and easy to read. The teacher management loop identifies the students and which questions were not answered correctly in 1, 2, or 3 tries.

MAJOR WEAKNESSES: The pace at which the text appears on the screen is so slow, upper-level students who read at grade level will lose interest. There is no way to escape back to the main menu once you are into the food group chain.

OTHER COMMENTS: The program is not very exciting. It seems most appropriate for grades 4-6. Younger children could not handle the vocabulary, and older students would be bored by the pace of the text. Are there really five food groups? It seems four is the accepted and most commonly taught number.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Fraction Fun with Fraction Man,™ Level 1

VERSION: Apple

PRODUCER: Edu-Link Corporation
Creative Learning Systems
P.O. Box 206
Southfield, MI 48037

EVALUATION COMPLETED: June 1985 by the staff and constituents of Region X ESC, Richardson, Texas.

COST: $39.95 plus 10% shipping and handling

ABILITY LEVEL: Grades 4 through 6
SUBJECT: Mathematics
TOPIC: Arithmetic, Fractions
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — Pre-test, post-test, student's instructions. In supplementary materials — Suggested grade/ability level(s), program operating instructions, teacher's information, student worksheets, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To enhance and reinforce the learning of basic fractions concepts. Specific goals are given at the beginning of each section in the program.

INSTRUCTIONAL PREREQUISITES: (INFERRED) It is necessary to have a basic understanding or a general knowledge of fractions.

CONTENT AND STRUCTURE: The microcomputer program Fraction Fun is part of an interrelated three component system designed to enhance and reinforce the learning of basic fraction concepts at home and in school. The overall program consists of three diskettes, a videocassette program and a 60-page Enrichment Workbook. Fraction Fun Level I introduces the basic operations of fractions with "like" denominators. It has within it five lessons. Each lesson has an Instruction and Practice and a Test Yourself section.

ESTIMATED STUDENT TIME REQUIRED: 10-20 minutes per lesson.

POTENTIAL USES: This package could be used as a supplement to standard fraction instruction for individual students.

MAJOR STRENGTHS: The package includes well-balanced questions; it is carefully put together. It is easy to use. The learner controls the pace of the presentation. The reward provides incentive for doing the lessons and for correct responses.

MAJOR WEAKNESSES: There is a lot of text and it is all in upper case letters. The student is a passive observer during a lengthy reward sequence. Although the positive feedback is encouraging, it slows down the pace and could be presented after completed fractions instead of after each number. No student recordkeeping feature is incorporated in the program other than a score sheet on the screen.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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The Grammar Examiner

VERSION: Apple

PRODUCER: DesignWare
185 Berry Street
San Francisco, CA 94107

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $44.95

ABILITY LEVEL: Grade 5 through Postsecondary
SUBJECT: Language Arts
TOPIC: Grammar
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe, or IIc, single disk drive, monitor. Also available for Commodore 64, 64K IBM-PC, IBM-PCjr.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) This package will help students to learn: punctuation, capitalization, subject-verb agreement, verb tenses, adverb and adjective usage and homonyms.

INSTRUCTIONAL PREREQUISITES: (STATED) The paragraphs which players must edit average an eighth grade reading level. The reading level of the manual averages seventh grade.

CONTENT AND STRUCTURE: This package contains one diskette and a 32-page User's Guide. The object of the game is to rise to Editor-in-Chief by mastering grammar skills. Land on a grammar square and edit paragraphs, answer multiple choice grammar questions and earn salary raises and promotions. Land on special squares and you could get a raise, or you might even get a demotion. The program includes four game boards and animated characters. The multiple skill levels of grammar problems and game play can be varied independently to maintain the challenge. More than 150 grammar problems are included, plus you can add your own.

ESTIMATED STUDENT TIME REQUIRED: Allow 30-60 minutes for use depending on the number of students. This program should maintain interest throughout the year if used 2-3 times monthly.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
•					Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 5.

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Grammar Examiner, continued

POTENTIAL USES: This package can be used effectively by a single student or a group to reinforce grammar skills learned in class.

MAJOR STRENGTHS: The instructions on the screen during the demonstration and during play are helpful. The options given to adjust sound, color, input device, and skill level are great. A second chance is given to erase or save the disks. Feedback is nonpunitive, and graphics are entertaining. The user can create his/her own grammar tasks or game board and store it on the disk. Minimal teacher guidance is necessary.

MAJOR WEAKNESSES: Additional support materials would enhance the program's classroom value. Durable binding on the packaging is a plus, but the diskette pocket could become easily torn with repeated handling. The comments and situations in the game are repetitive. Creating a game with only one disk drive is a cumbersome process. One must insert and remove the disk several times. The game board needs a better defined path and goals.

OTHER COMMENTS: The snapshot at the end is very clever!

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Language Arts: Parts of Speech

VERSION: Apple IIe

PRODUCER: Houghton Mifflin Company
TSC Division
PO Box 683
Hanover, NH 03755

EVALUATION COMPLETED: July 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon.

COST: $225.00. Parts of Speech is one in a series of four packages. The price of the complete set is $798.00. Multiple set discounts are available.

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Language Arts
TOPIC: Grammar
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple IIe, single disk drive, monitor. Also available for DEC Rainbow 100, IBM-PC, IBM-PCXT, and IBM-PCjr.
REQUIRED SOFTWARE: For IBM: DOS 2.0 or higher
For DEC Rainbow: MSDOS 2.05
PREVIEW POLICY: 30 day preview with purchase order
INSTRUCTIONAL PURPOSE: Remediation, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — pre-test, post-test. In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) This package addresses most of the skills taught which relate to the parts of speech. It is not intended to provide the initial instruction in these skills; that remains the responsibility of the teacher. The Series does however, try to be effective in reinforcing instruction by providing students with supplementary, individually-paced practice.

INSTRUCTIONAL PREREQUISITES: Prior instruction on the parts of speech.

CONTENT AND STRUCTURE: The Language Arts Series consists of 353 skills organized into 4 content areas: Sentence Structure, Parts of Speech, Usage, and Mechanics. This package contains 12 circulation diskettes, 12 backup disks, a 29-page User's Guide, Student Progress Record and Class Progress Record. This series is an instructional system designed to benefit both teachers and students.

ESTIMATED STUDENT TIME REQUIRED: Fifteen to twenty minutes per session.

POTENTIAL USES: This program could be used to review and reinforce skills which have already been taught in the classroom.

MAJOR STRENGTHS: Students' work can be recorded. The program is organized so that the work is individually paced. The user's guide is comprehensive and includes a summary of student procedures which would be very helpful. It gives examples before each pre-test, practice and post-test section. The content is accurate, comprehensive, and well explained.

MAJOR WEAKNESSES: There is too much text and no graphics. Sound effects and/or graphics would add greatly to this basically good program.

OTHER COMMENTS: Students will need teacher input on recording their scores before they get started.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Math Maze

VERSION: Apple

PRODUCER: DesignWare
185 Berry Street
San Francisco, CA 94107

EVALUATION COMPLETED: February 1985 by the staff and constituents of Region X ESC, Richardson, Texas.

COST: $39.95

ABILITY LEVEL: Grades 1 through 5
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 inch disk
REQUIRED HARDWARE: Apple IIc, IIe, II+, one disk drive, monitor. Also available for the 64K IBM-PC and PCjr; Atari and Commodore 64.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary material — suggested grade/ability level, instructional objectives, prerequisite skills/activities, sample program output, program operating instructions, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED)
To make practicing and memorizing math facts fun and exciting.

INSTRUCTIONAL PREREQUISITES: (STATED)
An introduction to the four basic mathematical operations: addition, subtraction, multiplication, and division.

CONTENT AND STRUCTURE: This package contains one diskette and a 24-page User's Guide. The program provides practice for addition, subtraction, multiplication, and division. It includes 40 prepared mazes, plus the student can also make his/her own mazes to use with the game. Multiple skill levels provide increasing challenge. Other options include: difficulty of math problems and game play vary independently; play with visible or invisible walls; and with or without a spider who tries to keep the student away from the numbers.

ESTIMATED STUDENT TIME REQUIRED: 10 to 15 minutes per session

POTENTIAL USES: This is a drill and practice program that can be used to reinforce primary math operations. Individual or small groups would be most appropriate.

MAJOR STRENGTHS: The software can be customized in the following areas: sound, level of difficulty, background color, designing your own mazes, and keyboard or joystick may be used.

MAJOR WEAKNESSES: The game is slow moving when used with small children.

OTHER COMMENTS: The user may escape the program at anytime.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale 5 (High) to 1 (Low)
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 3.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Mathematics - Grade 3

VERSION: Apple

PRODUCER: Intellectual Software
798 North Avenue
Bridgeport, CT 06606

EVALUATION COMPLETED: July 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon.

COST: $79.95; with management system $119.95

ABILITY LEVEL: Grade 3
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple II+, IIe, or IIc single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions.

INSTRUCTIONAL OBJECTIVES: To present a series of related concepts in mathematics, explain each concept, test the understanding of the student, give examples and present exercises to strengthen understanding.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains 4 diskettes and a 15-page User's Guide. The package contains a total of 40 programs, many with color graphics, which teach a wide variety of material appropriate for this grade level. Activities include: More About Adding and Subtracting, How to Multiply, How to Divide, What Third Means, What Dollars and Half-Dollars Are, How to Use a Dollar Sign, More About Calendars, More About Thermometers, How to Tell Time at Five-Minute Intervals, and How to Measure with a Ruler.

ESTIMATED STUDENT TIME REQUIRED: Fifteen minutes per session

POTENTIAL USES: This program could be used for review purposes only.

MAJOR STRENGTHS: The content is accurate and appropriate for the target audience.

MAJOR WEAKNESSES: The format of presentation is poor (horizontal vs. vertical). The graphics of coins and money are poor. The program is slow to accept responses. Some answers that are technically correct, but are not what the author expected, are considered incorrect by the program.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would not use or recommend use of this package.

Summary: Scale of 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 1, Technical Characteristics - 2.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Mathematics Activities Courseware, Level 4

VERSION: Apple

PRODUCER: Houghton Mifflin Company
TCS Division
PO Box 683
Hanover, NH 03755

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $150.00; multiple set discounts are available

ABILITY LEVEL: Grade 4
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, II+ or IIe, single disk drive, monitor. Also available for 64K IBM-PC, IBM-PCXT, and IBM-PCjr.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
PREVIEW POLICY: 30 day preview with purchase order
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To engage students in active experiences involving estimation, problem-solving strategies, and concept development.

INSTRUCTIONAL PREREQUISITES: (STATED) The computer activities are not intended to stand alone as incidental experiences. Each computer activity has prerequisites as indicated by Textbook Correlation sections found in the manual. In addition, an Introductory Lesson is included in the manual for each computer activity to help teachers preview the objectives and appropriate strategies with students.

CONTENT AND STRUCTURE: This package contains three disks with five computer activities on each disk, a complete set of backup disks, and a 68-page Teacher's Manual. Every computer activity is accompanied by notes for the teacher as well as suggested class activities and

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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(503) 248-6800

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Mathematics Activities Courseware, Level 4
continued

reproducible worksheets. Each activity is a game where the user tries to outwit his/her opponent or the computer.

ESTIMATED STUDENT TIME REQUIRED: The students can use the program for 15-20 minutes to review the concepts, or use the program for longer periods for reinforcement. With the 15 programs available the disks may be used many times by the students.

POTENTIAL USES: The students can use the programs for reinforcement or guided practice of their skills. The programs can be used individually by playing against the computer or in pairs or teams competing against one another. The best learning was observed when the students were playing each other; the interaction was very good.

MAJOR STRENGTHS: The activities reinforce the skills taught in the fourth grade very well. The skills used are those that need reinforcing. The programs make use of interesting games that challenge the student and the action does not detract from the educational process. Most of the programs require the use of problem solving strategies and not straight computation. The programs allow a student to play against the computer or another student. The program also allows the students to skip the instructions. Students are also shown the way to quit the program. The program makes good use of graphics for instruction and reward. The graphics are either a part of the instruction or enhance the process.

MAJOR WEAKNESSES: The directions aren't as clear as necessary, most students ran the program once to see exactly how it operated. In the Area Estimation program the title screen took too long. The Astroid Ace program is a little slow; there should be a way to speed it up. Estimation always emphasized closeness to the correct answer and evaluators were not sure that is the best way to judge an estimate.

OTHER COMMENTS: The package does not teach the problem solving skills necessary for success but relies on the teacher to introduce these skills.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Mathematics Activities Courseware, Level 7

VERSION: Apple

PRODUCER: Houghton Mifflin Company
TSC Division
PO Box 683
Hanover, NH 03755

EVALUATION COMPLETED: June 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon.

COST: $165.00, Multiple set discounts available

ABILITY LEVEL: Grade 7
SUBJECT: Mathematics
TOPIC: Problem Solving
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, II+, or IIe, single disk drive, monitor. Also available for 64K IBM-PC, IBM-PCXT, and IBM-PCjr.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
REVIEW POLICY: 30 Day
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — Suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To engage students in active experiences involving estimation, problem-solving strategies, and concept development.

INSTRUCTIONAL PREREQUISITES: (STATED) The computer activities are not intended to stand alone as incidental experiences. Each computer activity has prerequisites as indicated by Textbook Correlation sections found in the manual. In addition, an Introductory Lesson is included in the manual for each computer activity to help teachers preview the objectives and appropriate strategies with students.

CONTENT AND STRUCTURE: This package contains three disks with six computer activities on each disk and a complete set of backup disks. Every computer activity is accompanied by notes for the teacher as well as suggested class activities and reproducible worksheets. There is an 82-page Teacher's Manual. Each activity is a game where the user tries to outwit his/her opponent or the computer.

ESTIMATED STUDENT TIME REQUIRED: The students can use the programs for 15-20 minutes to review the concepts, or use the program for longer periods for reinforcement.

POTENTIAL USES: It would be useful for review and practice for single students against the computer. Some activities are designed for two individuals or two teams to compete against one another.

MAJOR STRENGTHS: This package is good for practice in a fun format, with a wide range of levels to the activities. It requires students to use ingenuity while doing drill and practice. It makes good use of estimation.

MAJOR WEAKNESSES: None stated.

OTHER COMMENTS: Teachers must organize the material to fit their students in order to make the package effective.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 4.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Mathsheet

VERSION: Apple

PRODUCER: Houghton Mifflin Company/
School Division
One Beacon Street
Boston, MA 02108

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $99.00; multiple set discounts available

ABILITY LEVEL: Grades 1 through 8
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II or IIe, single disk drive, monitor, printer. Also available for Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
PREVIEW POLICY: 30 day preview with purchase order
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, teacher utility

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, post-test, teacher's information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To generate math exercise worksheets.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette, a backup disk, and a 15-page User's Guide. The program has a variety of different levels which makes it useful to children ranging from first grade upward. It uses the computer's ability to generate numbers at random and provides printed sheets of practice exercises. While Mathsheet has been correlated with Houghton Mifflin Mathematics 1-8, its adaptability lends this program to use with any basal mathematics series and with general mathematics courses at the high school level as well.

POTENTIAL USES: The program could be used to provide individualized worksheets for students or to generate tests.

MAJOR STRENGTHS: This package generates math worksheets in addition, multiplication, subtraction and division. The levels available and the problems selected correlate to the Houghton Mifflin math series, but it would work with many textbooks since levels of problems are fairly standardized. Each worksheet takes about a minute to produce, so it is great for individual needs. Answers are also available. The program allows for the worksheet to contain more than one operation or level.

MAJOR WEAKNESSES: The program uses a lot of paper because a standard number of problems per row must be printed. The number of different types of printers supported by the program is limited. The user should be able to insert input control codes for other printers.

OTHER COMMENTS: This is a good useful teacher utility.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
				•	Use of package is motivational.
				•	Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
				•	Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
				•	Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 4.

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More Powers to You! Exponents and Scientific Notation

VERSION: Apple

PRODUCER: MicroLearn, a Division of MicroLab, Inc.
2699 Skokie Valley Road
Highland Park, IL 60035

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida, and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $35.00; Corvus Network version available for $200.00

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Mathematics
TOPIC: Exponents and Scientific Notation
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, IIe, or IIc, single disk drive, monitor. Also available for IBM-PC, PCjr, and Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, program operating instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (INFERRED)
The student will learn: how to write numbers using exponents, how to multiply and divide using exponents, and how to use scientific notation to solve math problems.

INSTRUCTIONAL PREREQUISITES: (STATED)
Students should possess skills and an understanding of concepts about reciprocals, division of fractions and decimals, basic operations of integers, and multiplication of decimals. Students who are weak in these areas should use the supplementary materials that are included.

CONTENT AND STRUCTURE: This package contains one disk and a 34-page User's Guide. The tutorial lessons are completely interactive; users receive an individualized explanation for every answer choice, whether correct or incorrect. Where appropriate, there are additional introductory pages, help screens and practice sequences called drills. The user can work in the tutorial mode to learn the material, or use the testing mode to pre-test or post-test. In either

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 3, Technical Characteristics - 2.

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300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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More Powers to You!, continued

mode, a score is given. Topics covered are: exponents, powers of 10, multiplying and dividing in scientific notation, and problem solving. A final test, five quizzes, worksheets, and self-correcting puzzles are provided in the manual.

ESTIMATED STUDENT TIME REQUIRED:
Fifteen to twenty minutes per session

POTENTIAL USES: This package could be used in a junior high or high school math or science class. It should only be used to review exponents and scientific notation, not introduce them.

MAJOR STRENGTHS: The concepts are broken down into varying levels which makes it easy to focus on a particular skill. Each level has both a tutorial and testing mode. The user has the option to Quit, Get Help, Skip Ahead, or Return to the Introduction at any time during the program. Numerous self-correcting puzzles and activity sheets, that correspond to the material presented in the program, are included in the support materials. When an incorrect response is given, the program branches to give step-by-step help in understanding the concepts.

MAJOR WEAKNESSES: The program is extremely slow and non-motivating. There are virtually no color, sound, or graphics enhancements. Variety in presentation is totally lacking. It would take forever for a teacher to rotate a couple of kids through the material. The students are given their percent score at the end of a topic, but no provisions to keep a record for the teacher are made.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Myths, Magic and Monsters

VERSION: IBM

PRODUCER: MicroLearn, a Division of MicroLab, Inc.
2699 Skokie Valley Road
Highland Park, IL 60035

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $35.00; Corvis Network version available for $200.00

ABILITY LEVEL: Grades 5 through 8
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM-PC, one dual-sided disk drive, monitor, color graphics board. Also available for 48K Apple II series, IBM-PCjr, Commodore 64.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — pre-test, post-test. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, program operating instructions, post-test, teacher's information, student's instructions, textbook correlation, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED)
After use of this package, students will be able to: demonstrate a literal understanding of a sentence or passage through recall of details and facts; identify the speaker within a paragraph in the absence of speaker labels; sequence sentences appropriately according to their content; predict outcomes and draw conclusions after reading selected passages; tell the main idea of a passage; explain the cause or effect of certain actions within a story or paragraph; and describe the mood of a paragraph or story, and tell which words the writer used to create specific feelings.

INSTRUCTIONAL PREREQUISITES: (STATED)
The reader must operate at about a fifth grade reading level.

CONTENT AND STRUCTURE: This package contains one disk and a 59-page User's Guide. The tutorial series provides lessons; some are actual teaching lessons and some stress test preparation. This package stresses systematic development of reading comprehension skills while reading stories of monsters, superstitions

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
			•		Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 2, Technical Characteristics - 3.

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Myths, Magic and Monsters, continued

and magical happenings. The lessons are interactive and the user receives an individualized explanation for every answer choice. There are additional introductory pages, help screens, and practice sequences called drills. Follow-up questions and a post-test are provided in the manual.

ESTIMATED STUDENT TIME REQUIRED:
Fifteen to twenty minutes per session

POTENTIAL USES: This program is best used as a remedial tool for individual students.

MAJOR STRENGTHS: The package provides immediate feedback in the tutorial mode. The content of the stories is interesting.

MAJOR WEAKNESSES: The closely-spaced, small print is hard on the eyes. The package is strictly text format with no color or graphics. It is not motivational to students. The beep sound when an incorrect response is entered is annoying and can be distracting to others in the class. The material is poorly packaged.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Play on Words

VERSION: Apple

PRODUCER: Intellectual Software
798 North Avenue
Bridgeport, CT 06606

MARKETING: Queue
5 Chapel Hill Drive
Fairfield, CT 06432

EVALUATION COMPLETED: May 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $29.95

ABILITY LEVEL: Grades 4 through 6
SUBJECT: Language Arts
TOPIC: Problem Solving, Logic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple II+, IIe or IIc, single disk drive, monitor. Software will also run on Franklin computers.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In supplementary materials — instructional objectives, program operating instructions, post-test.

INSTRUCTIONAL OBJECTIVES: The puzzles were designed to help students develop reasoning and analytical skills. These skills are necessary to solve word problems in mathematics, logic problems in philosophy, and to analyze written materials or spoken arguments. This program was developed to provide practice with these skills, in a non-threatening format.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette and a 4-page Teacher's Manual. Play on Words consists of word puzzles which require analytical and reasoning skills to solve. Each word puzzle depicts a commonly used word, phrase, saying, name, or title. A Play on Words puzzle is made up of letters, numbers and symbols. The way to solve the puzzle is to analyze all of the various aspects of the puzzle, such as the size, shape and location of the characters and their relative position to each other and to the screen.

ESTIMATED STUDENT TIME REQUIRED: The format makes it hard to estimate the amount of time needed to complete the program.

POTENTIAL USES: It could be used for problem-solving exercises in small groups or with individuals.

MAJOR STRENGTHS: None stated.

MAJOR WEAKNESSES: The information is too old for the students targeted. They love this type of game but they have no knowledge of the information being asked for. There does not seem to be any real instructional value to this program, it seems to be a computerized trivia game. The directions screen is poorly designed. The program terminates with a message of ILLEGAL QUANTITY ERROR IN 9610 when no name is given. There are no traps for yes/no responses; a default is used. The question "Do you want instructions?, Joe?" should be changed by removing the first ?.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
			•		Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
			•		Package achieves defined purpose.
		•			Content presentation is clear and logical.
			•		Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
			•		Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
		•			Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would not use or recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 2, Instructional Characteristics - 1, Technical Characteristics - 1.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Political Genie

VERSION: IBM

PRODUCER: Boring Software
P.O. Box 568
Boring, Oregon 97009

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $54.95 for IBM, $59.95 for Apple

ABILITY LEVEL: Grade 7 through Postsecondary
SUBJECT: Social Studies
TOPIC: Political Science, History, Civics
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM, one or two disk drives, monitor. Also usable on IBM-compatible systems (i.e., The Leading Edge, AT&T, ITT, and ComPaq). Also available for 128K Apple IIe and IIc, and TRS-80.
REQUIRED SOFTWARE: IBM: MS-DOS 2.1
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, resource/reference information, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) This package is designed to make it easy and possible for voters to evaluate the voting records of congressmen and congresswomen during election cycles. Students will learn the following lessons: 1) Congress decides important issues affecting our lives; 2) It is possible to analyze voting records of politicians; 3) Voting is important; and 4) Voters can hold politicians accountable for their votes.

INSTRUCTIONAL PREREQUISITES: (STATED) A basic understanding of the federal government, especially the legislative process, and the ability to read at a junior high level are helpful, but not essential, to use this courseware.

CONTENT AND STRUCTURE: This package contains two diskettes and a Technical/Teacher Manual. The students select the issues they believe are most important to them and then compare those issues to the voting record of the member of Congress they decide to evaluate. There is no prerequisite for mastery of other material. The program content is designed to elicit opinions and improve knowledge during discussions of issues. The 100 issues selected for inclusion in the Political Genie database contain all or most of the following criteria: 1) they will

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 4.

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Political Genie, continued

continue to be, or have the potential to continue to be, open political issues; 2) they generally represent issues with a significant division of opinion within the Congress and the country; 3) they are interesting because they have the potential to impact the lives of many people; 4) they reveal the internal operations of the House of Representatives; and 5) each is linked directly to a recorded floor vote.

ESTIMATED STUDENT TIME REQUIRED: Thirty minutes, 2 or 3 times per week to enhance material taught in class.

POTENTIAL USES: Use of this package is a super way to inspire class discussion and to get students interested in topics that impact their lives. It can be used by up to 8 students with little or no teacher guidance.

MAJOR STRENGTHS: This program can be used in a variety of areas in a Social Studies curriculum. It is easy to use and reliable. It accepts only inputs from required keys. It includes thorough documentation, although the program can be operated with little reference to it. The graphic display of comparison of records is good. The ability to select issues is a great option. The topic is highly motivating for students. Students can exit the program and return to the place they left off.

MAJOR WEAKNESSES: The choice of color combinations could have been better. The white text against the blue background is very hard on the eyes.

OTHER COMMENTS: The program is most easily used on a two-drive system, but will operate on a single drive system. Depending upon the hardware configuration, any screen can be dumped to the printer.

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Spellakazam

VERSION: Apple

PRODUCER: DesignWare
185 Berry Street
San Francisco, CA 94107

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $29.95

ABILITY LEVEL: Grades 2 through 6
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe and IIc, single disk drive, monitor. Also available for Commodore 64, 64K IBM-PC, IBM-PCjr, and Atari.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Game, drill and practice

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To motivate the student to spell words correctly.

INSTRUCTIONAL PREREQUISITES: (STATED) Second grade reading/spelling level.

CONTENT AND STRUCTURE: This package contains one diskette and a 28-page User's Guide. It comes with over 400 words from the Silver Burdette Spelling program. Words are divided into grade levels 2 through 6. Children can practice their spelling homework by adding their own words to the program. Spelling activity is based on a self-corrected test. Each word comes with a context sentence. Students can vary the difficulty of the words and the difficulty of the game independently. Multiple skill levels provide increasing challenge for one or two players. The game may be played using the keyboard or a joystick.

ESTIMATED STUDENT TIME REQUIRED: The program can be learned very quickly: fifteen minutes would be enough time to learn the basic skills. A brief section of the game could be completed in 5-10 minutes.

POTENTIAL USES: The package provides excellent opportunity for students to study spelling words on their own. It provides excellent

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 4.

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Spellakazam, continued

feedback and reinforcement through increasingly difficult levels. Students should not become easily or quickly discouraged.

MAJOR STRENGTHS: Good examples were given before the game started; the player could choose a level appropriate to his/her educational need. Commands are given to the student in a courteous manner. There is a short wait between spelling words and context sentences. The correction for misspelled words appeared immediately and stayed on the screen until the player was ready to continue. Sensory-motor abilities are tested along with intellectual skills. The program provides motivation by producing slight anxiety from racing against the magician. The game waited for the player to begin, allowing time to choose the correct word and correct spelling. A word could be misspelled three times before a new word appeared within the section. The misspelled word was repeated at the end of the section and the player was not allowed to complete the section until the word was spelled correctly. Teachers can put in their own word lists and sentences.

MAJOR WEAKNESSES: The Magician appeared to score points when he was not the first to reach the top hat. After a word was correctly spelled, the magic trick took a long time to complete. The process made for a long wait, especially with the turtle and the duck.

OTHER COMMENTS: This program appears to provide motivation for studying spelling words.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Spellicopter

PRODUCER: DesignWare
185 Berry Street
San Francsico, CA 94107

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $39.95

ABILITY LEVEL: Grade 1 through 5
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe, and IIc, single disk drive, monitor. Also available for 64K IBM-PC, IBM-PCjr, Atari, and Commodore 64.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Game, drill and practice

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To motivate the student to spell words correctly.

INSTRUCTIONAL PREREQUISITES: (STATED) First grade reading/spelling level.

CONTENT AND STRUCTURE: This package contains one diskette and a 28-page User's Guide. The user pilots a helicopter to rescue stranded letters in this spelling game with 400 words in 40 lists. There are levels of play ranging from first to fifth grade. A context clue is given with each word. Points are gained for spelling words correctly, and points are lost for misspelling. Users can add their own word lists and clues. Sound effects and animation are included.

ESTIMATED STUDENT TIME REQUIRED: Because this is a game format, the user can spend as little or as much time as desired.

POTENTIAL USES: This is an excellent way to review or learn spelling words.

MAJOR STRENGTHS: The demonstration is helpful. The lists of words included are great. The program is user controlled. The menus allow the user to escape from the program at any point. The game options are useful for a quiet classroom. The user is allowed to choose whether he/she wants to see the words in context. There is ample documentation in the booklet. There are good on-screen directions for the initialization of and creation of word lists by the user. The "Things to Do with Spellicopter" section is excellent.

MAJOR WEAKNESSES: The program needs directions on the screen; otherwise, the user must read the booklet before playing. A notation in the documentation and on the screen regarding the use of the repeat key would be good for keyboard users. There is no recordkeeping capability.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics- 4, Technical Characteristics - 4.

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States

VERSION: Apple

PRODUCER: Ventura Educational Systems
3440 Brokenhill Street
Newbury Park, CA 91320

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida, and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Social Studies
TOPIC: Geography
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple II, II+ or IIe, single disk drive, monitor (color preferred)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To learn the names of the fifty states and their capitals.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk and an 8-page manual. STATES is a geography study unit in which the user learns names of the fifty states and their capitals. The user is challenged to recognize each state by its shape, geographical region and neighboring states. Many interesting facts about each of the states are presented during the use of the program, including the area, population, electoral votes, state flower and bird. With the Data Retrieval Utility the user can selectively search the data provided with the program to recall specific information.

ESTIMATED STUDENT TIME REQUIRED: Fifteen minutes per session

POTENTIAL USES: The program can be used to review states and capitals and to learn more facts about and locations of states. Students can work individually or compete in small groups. Pencil and paper is necessary to maintain scores on the game. Teachers can create additional activities with the Data Retrieval Utility.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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States, continued

MAJOR STRENGTHS: The information is accurate and comprehensive. The graphics are well done and very useful. The program provides students with clues when they are typing in answers. Students can operate the program easily as it is menu-driven. The sound is adjustable. The non-punitive approach used is especially good for students who have poor academic esteem. Students can choose to guess the whole answer or enter it a letter at a time. Only correct letters are accepted. Even though points are lost for incorrect inputs, the right letters will earn them back.

MAJOR WEAKNESSES: Documentation does not include prerequisite skills, program objectives nor teacher-directed activities. The Data Retrieval Utility is confusing to use. In the quiz game, some students may be confused about how to select two categories to match.

OTHER COMMENTS: A teacher's management system would increase the classroom value.

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States and Capitals

VERSION: Apple

PRODUCER: Gamco Industries, Inc.
Box 1911
Big Spring, TX 79721

EVALUATION COMPLETED: July 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon, and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95; with backup $54.95

ABILITY LEVEL: Grades 4 through 10
SUBJECT: Social Studies
TOPIC: Geography
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor. Also available for TRS-80 Models III and IV, and Commodore 64.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary materials — instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To learn the 50 states, their capitals and major cities.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette, a backup diskette, and an 8-page User's Guide. All 50 states are included in four regional maps, and students choose the lesson and region they wish to work on. Students may choose from 8 lessons, all of which are drill and practice in format. The number of questions in a lesson may be changed by the teacher to any number from 1 to 50. At the end of each set of questions, students automatically are moved to another region or repeat the region they just finished, depending on their scores. A student management system automatically records the names of students who complete a lesson, the lesson and region they complete, the raw score, and the percent correct. The system holds up to 200 student files.

ESTIMATED STUDENT TIME REQUIRED: Ten minutes per lesson

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
				•	Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
•					Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 3.

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States and Capitals, continued

POTENTIAL USES: This package would be an excellent supplement to Social Studies curriculum. It reinforces state locations within regions and emphasizes important cities, as well as capitals.

MAJOR STRENGTHS: The teacher management section of the program makes it easy for the teacher to have accountability. The program has several error traps where it is impossible for the user to key in incorrect responses. After each lesson, the user is given a percent score. To motivate the user, if a score of 80% or above is achieved, the user has an option to play a game called Snakebite. The game moves very quickly and gives the user an option for sound. If a question is missed in the lesson, it is recycled and used again.

MAJOR WEAKNESSES: The documentation seems to have several things missing or assumed. Once a student is in a lesson, there are no options to get out until they have answered X amount of questions. The color scheme of the letters in information display screens is distracting (green and purple).

OTHER COMMENTS: The key response is slow overall. The program continuously accesses the disk.

Supermind

VERSION: Apple

PRODUCER: Educational Activities, Inc.
P.O. Box 392
Freeport, NY 11520

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $69.00

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Business Education, Language Arts
TOPIC: Advertising, Critical Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II family, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, simulation

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, resource/reference information, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) This package is intended to serve as an introduction for courses where a consideration of advertising and propaganda techniques is required. In addition to teaching about these techniques, the program fosters the ability to read more critically and develop comprehension skills. The program will help the teacher explain and demonstrate cause and effect, critical reading and propaganda techniques in a graphic way, combining words and colorful pictures which closely simulate real advertising in a way which is difficult to present in words alone.

INSTRUCTIONAL PREREQUISITES: (STATED) Reading at level 4-5.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, management system, documentation, five books, and reproducible Activity Masters. The 30-page photo-illustrated book AND NOW THIS MESSAGE describes the creation of a product and the development of a television advertising campaign. Terms used in business and advertising are clearly defined in a glossary, and reading comprehension questions test students' understanding. The accompanying disk uses computer graphics to teach five commonly used

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 3.

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Supermind, continued

propaganda techniques — testimonial, emotional words, repetition, transfer, and bandwagon. Students learn to recognize the way each technique is used by analyzing different types of ads shown on the computer and responding to queries about them. The program branches to reteach when necessary. Successful comprehension is rewarded with a chance to play a maze game which sharpens thinking skills.

ESTIMATED STUDENT TIME REQUIRED: No more than a total of 2 hours on the software itself; if the included support materials are used the time will increase.

POTENTIAL USES: This package could be used to introduce or review propaganda techniques. It should be used in a learning center environment or for small group lessons.

MAJOR STRENGTHS: The lesson is clearly stated. The graphic displays are interesting. A teacher management system is included. Suggested follow-up activities and support materials, including 5 reading booklets are provided. If a student enters a wrong answer, correction and review is given.

MAJOR WEAKNESSES: The content is presented in a textbook fashion, there is no use of randomization. Not only will students quickly lose interest, but this approach does not utilize the computer's capabilities appropriately. The game is not very interesting. There are no suggested lesson plans. Students cannot move back to a previous screen if they choose to review.

OTHER COMMENTS: The format is tutorial/drill.

Typing

VERSION: 1.5-Apple

PRODUCER: Gamco Industries
Box 1911
Big Springs, TX 79720-0211

EVALUATION COMPLETED: July 1985 by the staff and constituents of Florida Department of Education, Tallahassee, Florida.

COST: $39.95; with backup $54.95

ABILITY LEVEL: Grade 5 through Postsecondary
SUBJECT: Business Education
TOPIC: Typing
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — sample program output, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To increase typing skills and offer practice to students in typing classes.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students must have general knowledge of keyboarding skills.

CONTENT AND STRUCTURE: This package contains one disk and a 12-page teachers guide. It consists of a typing tutorial with a reinforcement game. There are two sections of teacher management: student management and program management. The disk provides guided drill and practice opportunities in basic typing skills as well as a test which determines students' typing speeds.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes per session

POTENTIAL USES: This package could be used as a practice exercise with beginning students.

MAJOR STRENGTHS: Because the Apple II Plus does not generate lower case letters without software and hardware modifications, the text for the drill and practice excercises is in uppercase letters. Consequently the package does not provide practice typing uppercase using the shift key.

MAJOR WEAKNESSES: The typing speed gives the results in gross words a minute (GWAM) which does not take into account the accuracy of the typing. Since the user can enter any passage of text, the program cannot check the typing portion for errors. The passage typed during the speed test can be printed and corrected later. The teachers guide gives a formula for translating the GWAM to words per minute (WPM).

OTHER COMMENTS: It is not reliable for giving an accurate WPM score because nonsense words can be typed to raise the score and mistakes aren't taken into consideration.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 3, Technical Characteristics - 3.

Northwest Regional Educational Laboratory
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(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Verbs: Action and Linking Verbs

VERSION: Apple

PRODUCER: Intellectual Software
798 North Avenue
Bridgeport, CT 06606

EVALUATION COMPLETED: June 1985 by the staff and constituents of Teacher Education and Computer Center, Region 15, San Diego, California.

COST: $29.95; with management system $39.95

ABILITY LEVEL: Grades 5 through 8
SUBJECT: Language Arts
TOPIC: Grammar
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple II+, IIe or IIc, single disk drive, monitor. Also available for IBM-PC, PCjr, and TRS-80 Models III or IV.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, instructional management
INSTRUCTIONAL TECHNIQUES: Tutorial

DOCUMENTATION AVAILABLE: In supplementary materials — post-test, instructional objectives, suggested grade/ability level.

INSTRUCTIONAL OBJECTIVES: (STATED) To review or introduce the parts of speech for children in grades five through eight.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette and a 13-page User's Guide. The disk covers transitive and intransitive verbs, and verb tense. It presents one part of speech, explains its function and its relationship to other parts of speech, and presents exercises to strengthen understanding. A Classroom Management System is included which allows teachers to view individual student's progress, review groups of students' achievements, and produce hard copy of either.

ESTIMATED STUDENT TIME REQUIRED: Ten days at 15 minutes per lesson.

POTENTIAL USES: This program can be used with small groups or individuals for drill and practice or review.

MAJOR STRENGTHS: The immediate feedback of the correct answer is good. The program can be returned to a specific level.

MAJOR WEAKNESSES: The learner does not control the number of questions. The questions are not presented again if missed. The screen design is terrible! The whole screen is filled (about 2/3) with instructions and the bottom 1/3 is used for presenting the questions and providing feedback. This visual display is not effective for emphasizing important ideas. The support materials are inadequate. The screen display while loading a lesson contains an incomplete sentence which is totally unacceptable in an English program—"Let's work on. L10: Introduction."

OTHER COMMENTS: The caps lock key must be down. Evaluators considered this program to be a paper and pencil use of the computer. It is hard to write a motivating program on this subject, but this program makes no attempt to use the special features of the computer.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
			•		Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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4-H Ding Darling Soil, Water, Wildlife Project

VERSION: Apple

PRODUCERS: Heartland Education Agency
1932 Southwest Third Street
Ankeny, IA 50021

Cooperative Extensive Service
Iowa State University of
Science and Technology
Ames, IA 50011

EVALUATION COMPLETED: October, 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $25.00 in Iowa.
$30.00 outside of Iowa.

ABILITY LEVEL: Grades 5 through 8
SUBJECT: Science, Social Science
TOPIC: Environmental Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: With written permission.
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUE: Simulation, problem solving, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, post-test, teacher's information, resource/reference information, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To develop an undestanding of environmental issues relating to soil, water and wildlife. Each of the 30 lesson plans contain specific objectives.

INSTRUCTIONAL PREREQUISITES: (INFERRED) None stated. The software is intended to be used after the filmstrips and classroom activities.

CONTENT AND STRUCTURE: This package contains a 12-page teacher guide, three filmstrips with accompanying sound cassettes, ten lesson plans in each of three units (soil, water, and wildlife), three posters, and three program disks. Lesson plans involve interpreting Ding Darling's famous editorial cartoons, using "find out" cards, and other hands-on activities. The three computer programs deal with application of knowledge in each of the three areas. They are set up as simulation/decision-making programs to allow students to apply knowledge gained in the ten previous modules of each unit. The programs may be used as final modules to each unit or as an

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
•					Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 3.

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4-H Ding Darling Project, continued

evaluation tool. Each lesson plan includes objectives, ideal number of students, time, materials, sites, preparation, procedure, follow-up, ideas to try next, and some "open access" for kids only for each of the 30 lesson plans.

POTENTIAL USES: The package has application in art, science, math and social studies or any class which deals with resource management or urban planning. Modules are designed for a variety of numbers of students. This package could easily be used in the classroom and is not intended to be limited to 4-H.

ESTIMATED STUDENT TIME REQUIRED: Operating time for each program disk is usually between 15-30 minutes.

MAJOR STRENGTHS: While intended for grades 5-8, many modules can be easily adapted to other grade levels. One teacher particularly liked the game simulation format. Many resources are given for each subject area. The three computer programs are culminating simulations dealing with resource management which focus on the concepts of the unit.

MAJOR WEAKNESSES: There is a lack of documentation to explain purpose and procedure options. While the objectives of each activity are clearly stated, there is no statement of overall goals and objectives. Users would need some teacher help in utilizing the program.

OTHER COMMENTS: The information given deals with the plains states, specifically Iowa. While some of the information may be applicable to other areas in North America, students in other geographical areas may not relate. The simulations employ discovery learning and require the student make decisions with very little information about what the outcome might be.

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The ABC's of Programming Your Apple

VERSION: Apple

PRODUCER: ABC Software, Inc.
4894 Tahiti Lane
Naples, FL 33962

EVALUATION COMPLETED: December 1984 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $69.95

ABILITY LEVEL: Grade 8 through Postsecondary
SUBJECT: Computer Science
TOPIC: Programming
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test, student's instructions. In supplementary materials — instructional objectives, program operating instructions, post-test, teacher's information, resource/reference information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach the fundamentals of BASIC programming and how computers can be used to enrich our lives. A detailed list of skills and knowledge to be learned is included at the beginning of each chapter.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The user needs to be able to read at least at a seventh grade level. No prior computer experience is necessary.

CONTENT AND STRUCTURE: This package consists of two diskettes and a 204-page support manual. The ABC's of Programming Your Apple is an interactive, self-instruction system designed to respect the novice programmer. New concepts are explained and related to previous learning. The lessons involve running numerous hands-on Programmed Instruction Units. Each chapter concludes with exercises to test mastery. The exercises are instructive within themselves because the learner can call upon help from the Diskette Tutors which provide the following assistance: Problem Solving Hints, Answer Keys, and Tutorial Explanations. The documentation also includes a glossary, an index, other software reviews and a discussion on "Where Do I Go From Here?".

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
			•		Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would not use or recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 2, Technical Characteristics - 2.

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The ABC's of Programming, continued

ESTIMATED STUDENT TIME REQUIRED: Total time of 10-15 hours. Suggested use is one hour per day for a two-week period

POTENTIAL USES: Reviewers agreed that this software is not designed for classroom use. It is appropriate in an independent study or "self-track" situation for high school or adult students.

MAJOR STRENGTHS: The software uses good examples. A glossary is included at the end of each unit.

MAJOR WEAKNESSES: There are errors in the printed material (text) and the content of the text is outdated when recommending application software. It does not require much student interaction. You could present the disk-based material from a text with equal effectiveness.

OTHER COMMENTS: Easy to follow. Easy to use. Better material is available!

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Arith-Magic II

VERSION: Apple

PRODUCER: Quality Educational Designs (QED)
P.O. Box 12486
Portland, Oregon 97212

EVALUATION COMPLETED: September 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $35.00

ABILITY LEVEL: Grades 4 through 10
SUBJECT: Mathematics
TOPIC: Arithmetic, Measurement
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, and disk drive, monitor. Also available for TRS-80 III and IV
REQUIRED SOFTWARE: Apple: DOS 3.3, TRS-80: TRSDOS
BACKUP POLICY: The buyer may make one backup copy.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Problem solving, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop and reinforce the concepts of area and perimeter. Detailed objectives for each lesson are included in the support materials.

INSTRUCTIONAL PREREQUISITES: (STATED) Students need to be able to perform calculations involving addition and multiplication. Use of the games requires an understanding of the concepts of area and perimeter. The program contains a brief tutorial on these concepts if needed.

CONTENT AND STRUCTURE: This package contains one disk and a teacher support manual. The disk contains three games, two help programs and two explorations of the mathematical questions which arise in the games. The games are: "Squ-area Game" which shows patterns in perfect squares, "The Rectangle Game" which lays the groundwork for factoring, and "Per-area Game" provides practice with area and perimeter.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 4.

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Arith-Magic II, continued

POTENTIAL USES: Fourth, fifth, and sixth graders would benefit from the first three games and the two help programs. The other programs could be used for enrichment. Upper grades would make best use of the two exploration programs. Some programs could be used as a demonstration. The games are suited for use by individual students or pairs of students.

ESTIMATED STUDENT TIME REQUIRED: Each of the seven programs would take from 15 to 20 minutes to complete, depending upon the grade level, previous exposure to the concepts, and the number of students participating.

MAJOR STRENGTHS: The user has the option to exit the program or run the program again at any time. In each game the user is asked to select from four levels of difficulty. If the user is having difficulty finding the area or perimeter, he/she is referred to the help program. The students are encouraged to work with a physical model while doing the program, as well as the visual model on the screen. Black and white masters for student note sheets are included. The two exploratory programs are excellent!

MAJOR WEAKNESSES: More graphics and some sound would enhance the program.

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The Basics of BASIC

VERSION: Apple

PRODUCER: Focus Media, Inc.
839 Stewart Avenue
Garden City, NY 11530
800/645-8989 or 516/794-8900

EVALUATION COMPLETED: June 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $99.00

ABILITY LEVEL: Grades 7 through Postsecondary
SUBJECT: Computer Science
TOPIC: Programming
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, single disk drive and monitor. Also available for IBM-PC, Commodore 64, and TRS-80 III and IV.
REQUIRED SOFTWARE: Apple: Applesoft DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information, resource/reference information, student's instructions, glossary.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach the fundamentals of BASIC programming on an Apple computer.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package consists of 4 diskettes, backup diskettes, and a 130-page Lesson Planner Guide. The complete package contains 12 programs that guide students through introductory BASIC programming. The modules include: An Introduction to the Keyboard, Programming in Direct Mode, All About Strings and Numeric Constants, An Introduction to Programming, Formatting the Output, Looping and Branching, Conditional Statements, String Handling Techniques, Introduction to Mathematical Functions, An Introduction to Arrays, and Error Messages and Disk I/O. The program has a reading speed option which will allow students to adjust word scrolling speeds to their own reading level.

ESTIMATED STUDENT TIME REQUIRED: Approximately 5 hours for the software interaction, 12 hours if the text is used as prescribed.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 5.

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The Basics of BASIC, continued

POTENTIAL USES: This package can be used by students who wish to learn programming in Applesoft BASIC. Students may use this as a tutorial or a teacher can present a lesson which is then reviewed and practiced using the software. It would be appropriate for use in a Computer Literacy or Programming course.

MAJOR STRENGTHS: The presentation style is straightforward. The manual supplements and reinforces the software very nicely. All three reviewers felt that this was a good product for those trying to learn fundamental BASIC programming and said they would want it available to them for some classroom use.

MAJOR WEAKNESSES: Use of this package involves quite a bit of reading.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Biology Challenge

VERSION: Apple

PRODUCER: Island Software
Box 300
Lake Grove, NY 11755

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon

COST: $29.95

ABILITY LEVEL: Grade 9 through Postsecondary
SUBJECT: Science
TOPIC: Biology
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+ or IIe, one disk drive, monitor. Also available for Commodore 64.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
PREVIEW POLICY: Package may be returned for full refund within 30 days.
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, teacher's information, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide an opportunity for the students to review their knowledge of general biology in the specific categories of: genetics, biochemistry, cells, animals, plants, humans, development, ecology, taxonomy, and general biology.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The package is not intended to teach the biology content covered. The student must have prior knowledge of the biology topics listed above.

CONTENT AND STRUCTURE: This package contains one disk and a two-page instruction sheet. Players, or teams of players, match wits by first selecting a biology category from those available and then answering the question presented. Points are awarded for correct answers.

POTENTIAL USES: This game can be played by pairs of students or teams of students competing against each other. If a large monitor is used, it could be used with large groups of students. It would be best used for review near the end of a year of biology.

ESTIMATED STUDENT TIME REQUIRED: Thirty to forty-five minutes.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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Biology Challenge, continued

MAJOR STRENGTHS: There are 200 questions in the data bank and no question is ever repeated. The game format is fun and very motivating for the students. The fill-in-the-blank format requires the student to know the answer. The package makes an excellent review of biology facts.

MAJOR WEAKNESSES: The program does not allow the teacher to add his/her own questions to the categories. Alternate correct answers are considered wrong. The program does not allow the teacher to adjust the total points required to win.

OTHER COMMENTS: Because the program randomly chooses from all of the categories, the package is useful only after all categories have been covered. It would be helpful if the teacher could select the topics used in the game.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Brain Booster

VERSION: Apple

PRODUCER: Trillium Press
Box 921 Madison Square Station
New York, NY 10159
(212) 505-1440 or 1441

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95 with backup diskette

ABILITY LEVEL: Any grade level. This package is designed for use with gifted students or students preparing to be tested for the gifted program.
SUBJECT: Problem solving
TOPIC: Visual analogy, reasoning skills
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor. Also available for Commodore 64.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, problem solving, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — instructional objectives, program operating instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) Brain Booster is designed to help children develop reasoning by visual analogy skills.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students need to discriminate between visual patterns. It requires no verbal ability and thus is available to children who cannot read.

CONTENT AND STRUCTURE: This package contains one diskette, a backup diskette and a one-page description of the program and operating instructions. The goal of the exercise is to discover the odd shape. Each of 52 screens shows 9 shapes in a matrix. One shape does not fit in with the others. The odd one stands out because of its geometrical formation or because of its failure to continue a pattern in relation to the other shapes. Patterns run vertically, horizonally, and some employ both vertical and horizontal shape progressions at the same time. The player can adjust the amount of time allowed to find the odd shape. A student file system, for teacher use, is built into the program.

POTENTIAL USES: This program could be used to develop and sharpen visual discrimination skills. It would fit in well with a logic, problem solving

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
				•	User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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Brain Booster, continued

or visual discrimination unit. Individuals or pairs, from elementary to high school grade level, would benefit. "Students in a Gifted program would love it," according to one teacher.

ESTIMATED STUDENT TIME REQUIRED: The entire package of 52 screens would take about 15 to 30 minutes depending on the speed the user selects.

MAJOR STRENGTHS: The program is very motivational. It provides practice discriminating among different patterns in a timed environment. The geometric patterns start with very simple designs and progressively become more complex. The user can enter the speed at which they wish to view the screens. All directions are on the disks. In the beginning of the program, the user is asked if the information typed is correct, thus allowing for typing mistakes.

MAJOR WEAKNESSES: Once a student has mastered all 52 screens, the program is of no use. Rewards are repetitive. The text is all upper case which is hard on the eyes. The program gives more complex patterns when simpler ones aren't correctly identified. Once the user misses a problem, no time is given to analyze the mistake, nor is any explanation given. This form of feedback does not allow students to learn from their mistakes. Once the student has started the sequence of patterns, there is no way to exit the program until the sequence of 52 patterns has been completed. The support materials are virtually non-existent. Illustrations of all 52 screens with explanations would be helpful to the teacher.

OTHER COMMENTS: The slowest speed available is too fast for some students which makes the package useful only for gifted students. The color graphics enhance the program.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Computer Science I

VERSION: Apple

PRODUCER: Microcomputer Workshops
Courseware
225 Westchester Avenue
Port Chester, NY 10573
914/937-5440

EVALUATION COMPLETED: June 1985 by the staff and constituents of the Institute for Educational Research, Glenn Ellyn, Illinois.

COST: $34.95

ABILITY LEVEL: Grades 9 through 12
SUBJECT: Computer Science
TOPIC: Programming
MEDIUM OF TRANSFER: 5-1/4 inch disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor. Also available for IBM-PC and PCjr.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Backup disks included
PREVIEW POLICY: 30-day preview with school purchase order
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Demonstration

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary material — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions.

INSTRUCTIONAL OBJECTIVES: To graphically demonstrate three different shuffling techniques and one hashing method.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Programming ability in BASIC.

CONTENT AND STRUCTURE: This package contains one disk and a 14-page booklet. The program graphically displays three shuffling techniques and one hashing function. The user controls the shuffle, opting for step-by-step or continuous display. The hashing method is displayed as a two-part process: 1) The storing of values, and 2) the search for a value.

ESTIMATED STUDENT TIME REQUIRED: Ten to twenty minutes for each of four sections.

POTENTIAL USES: This package can be used as a demonstration of shuffle and hashing routines in an advanced programming class.

MAJOR STRENGTHS: The user controls the shuffle and hashing routines.

MAJOR WEAKNESSES: It does not integrate with previous learning of computer concepts or commands. The content is too specific and is only of value to a limited group of students. The package does not relate the program code shown in each type of shuffle or hashing to what is happening in the demonstration.

OTHER COMMENTS: The package is not a self-instructional program. Teacher explanation is required.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
				•	Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale 5 (High) to 1 (Low)
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Cosmic Carnival

VERSION: Apple

PRODUCER: EPCOT Educational Media
Walt Disney Educational Media Co.
500 South Buena Vista Street
Burbank, CA 91521

EVALUATION COMPLETED: September 1985 by the staff and constituents of Region X ESC, Richardson, Texas and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95

ABILITY LEVEL: Grade 7 through Postsecondary
SUBJECT: Social Studies, Business Education, Mathematics
TOPIC: Economics
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, printer (optional), joystick (optional), monitor (color recommended).
REQUIRED SOFTWARE: One blank disk (optional)
BACKUP POLICY: Backup is provided, as well as a guarantee of replacement if damaged within 90 days.
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To introduce students to the everyday business world: and to introduce students to economic principles by providing an opportunity to manage a simulated small business for a week.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The user should be familiar with the business and economic terms of supply, demand, and profit.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, and a 16-page User's Guide. In "Cosmic Carnival", the student assumes the role of the manager and operator of three carnival rides for a period of one week, Monday through Friday. They set the opening and closing time, ticket price, ride length, and decide how many seats to use. They even have to deal with such unpredictable factors as bad weather. The goals of the simulation are to make a profit over the one-week period, and to run the carnival in the most energy efficient way possible. If students achieve both goals, they are awarded playing time on the arcade-style computer game, "Cosmic Probe".

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
•					Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 4, Technical Characteristics - 5.

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(503) 248-6800

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Cosmic Carnival, continued

POTENTIAL USES: This simulation could be used by individual students or small groups of students at the junior high school level for enrichment in social studies, math, or consumer education.

ESTIMATED STUDENT TIME REQUIRED: 30 to 50 minutes

MAJOR STRENGTHS: The graphics and sound effects are a nice compliment to the program. The program provides numerous options, including: sound/no sound, helps, reviews, save game to disk, and return to saved game. During the simulation the student has control over a wide range of variables. The results of students' decisions are immediately and graphically shown. The documentation includes follow up activites useful for integrating the package into the curriculum. The arcade game provides an incentive for doing well.

MAJOR WEAKNESSES: The nature of the package and the graphics would not be appealing to many high school students. The arcade game intended to provide an incentive, may do just the opposite for many females.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Countdown, Test Simulator, Authoring and Management System

VERSION: Apple

PRODUCER: Tyson Educational Systems, Inc.
P.O. Box 2478
Miami, FL 33055
305/431-4268

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon

COST: $49.95. Backup disk available for $9.95. Ten to 15 backups for use at one school location are $5.95 each with purchase of original.

ABILITY LEVEL: Any grade
SUBJECT: Any subject or topic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Available separately
PREVIEW POLICY: None
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, authoring system

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — program operating instructions, sample program output, teacher's information.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide a teacher utility for administering tests and authoring tutorials and games.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The prerequisites will vary according to the content entered by the teacher.

CONTENT AND STRUCTURE: This package contains a master program disk, a sample file disk, a 20-page Teaching Guide, and 8 pages of documentation. The package contains the following major components: COUNTDOWN is an educational game which gives the student 10 questions and then, displays the name of the high scorer and their rating at the end. TEST SIMULATOR is played like COUNTDOWN, but does not display the high score or the rating. It allows for control of the level of difficulty, the way points are earned, the number of points deducted for incorrect answers, the number of questions, the way tutorial screens are displayed, and the option to write the results to a printer or disk. The AUTOLEARN SYSTEM allows the user to preset the menu selections, questions, and tutorials. The disk will then boot and run for the student with all selections preset.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
				●	Content is accurate.
				●	Content has educational value.
				●	Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
				●	Content presentation is clear and logical.
				●	Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
				●	Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
	●	●			Learner controls rate and sequence.
				●	Instruction integrates with prior learning.
				●	Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
●					Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - NA, Instructional Characteristics - 3, Technical Characteristics - 3.

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Countdown, continued

THE AUTHORING SYSTEM allows the user to write and edit questions and tutorials, and store them on the disk. THE MANAGEMENT SYSTEM allows the user to store, average and print student results.

POTENTIAL USES: The package would be useful for creating tests, tutorials and games for any subject and almost any grade level. It would be particularly useful for administering makeup tests and quizzes.

ESTIMATED STUDENT TIME REQUIRED: The teacher can create a 10-item quiz easily in 20 minutes. Students could take the 10-item quiz in about 5 minutes.

MAJOR STRENGTHS: An option is available which allows the teacher to provide corrective feedback if the student makes an error. The authoring system is fairly easy to use. The teacher could use the system after a 15 to 20 minute orientation.

MAJOR WEAKNESSES: The screen prompts are a bit difficult to understand the first time through. The program is highly structured and limited to multiple choice questions. Student involvement is limited to answering the questions and/or reading tutorial screens.

OTHER COMMENTS: The rate and sequence of the presentation is determined by the teacher during the development of the tutorials. Although the package is quite limited, it could be a useful low cost authoring system.

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The criteria used for this evaluation have been customized to accommodate SCIENCE courseware.

Discover: A Science Experiment

VERSION: Apple

PRODUCER: Sunburst Communications
39 Washington Avenue
Pleasantville, NY 10570

EVALUATION COMPLETED: July 1985 by the staff and constituents of Jefferson County Schools, Lakewood, Colorado, and Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $55.00

ABILITY LEVEL: Grades 6 through 12
SUBJECT: Sciences
TOPIC: Problem Solving
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe or IIc, single disk drive, monitor (color preferred)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, microworld, game, problem solving

OTHER FEATURES: None identified
SCIENCE PROCESSES INVOLVED: Acquiring information, organizing information, interpreting information, and using the Scientific Method.

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's information. In supplementary materials — suggested grade/ability level(s), instructional objectives, prerequisite skills/activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To improve note taking and observation skills; to analyze data collected; to formulate hypotheses for data collected; to test out formulated hypotheses; and to review and reformulate hypotheses based on test outcomes.

INSTRUCTIONAL PREREQUISITES: (STATED) The student should be at the 7th grade reading level (Raygor) and should possess basic note taking, logical thinking, and observation skills.

continued on back →

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
				•	Content represents current knowledge of subject.
		•			Science issues presented objectively.
	•				Content has educational value.
	•				Science processes well integrated into package.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
		•			The package makes good use of computer time.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.

SA	A	D	SD	NA	
	•				Student creativity is effectively stimulated.
		•			Feedback is effectively employed.
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Package components are durable.
	•				Information displays are effective.
		•			Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 2, Instructional Characteristics - 2, Technical Characteristics - 2.

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Discover: A Science Experiment, continued

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, and a 24-page User's Guide. You are one of the country's top scientists. Your speciality is the study of strange new life forms. A recent space probe has just brought back several new creatures. It is your job to keep the life forms alive as long as possible. But what do they need for their existence? What food do they eat? Are there elements in the environment in which they cannot survive? Can all the forms exist together or must they be separated? You bring them into the Lab one at a time and set up experiments to collect data on each creature. Your skill depends on your ability to form and test hypotheses and collect data.

POTENTIAL USES: Although the manual states that the program can be used in demonstration mode (large group), reviewers think it is more appropriately used in small groups.

ESTIMATED STUDENT TIME REQUIRED: The producer suggests three class periods for demonstration mode; five or more lab periods for typical laboratory use.

MAJOR STRENGTHS: The teacher's manual contains some good activities and evaluation worksheets.

MAJOR WEAKNESSES: This program is difficult to run and figure out. The amount of data gathering by the students is too much and the pace is too slow. Students get bored waiting for things to happen. Most students won't "stick-it-out" and solve the problem and would lose interest after a short while.

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Earth Science Series: Hydrologic Cycle

VERSION: 1984

PRODUCER: IBM, Inc.
Personal Computer
Education Software
P.O. Box 1328
Boca Raton, FL 33429-1328
305/998-2000

EVALUATION COMPLETED: May 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $49.00

ABILITY LEVEL: Grade 9 through Postsecondary
SUBJECT: Sciences
TOPIC: Earth Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM-PC, PCjr, PC portable, PC-XT or PC-AT, one double-sided disk drive, color monitor
REQUIRED SOFTWARE: PCjr: BASIC cartridge. For others: DOS 2.0 or higher. For all: two blank double-sided, double-density disks
BACKUP POLICY: Make your own backup
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, simulation

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) Upon completion of the program Hydrologic Cycle students will be able to: name the source of energy for the hydrologic cycle; name and define the global systems through which water circulates in the hydrologic cycle, describe evaporation, transpiration, condensation, precipitation, infiltration, percolation, surface runoff, and groundwater runoff; describe how water is stored; describe the exchanges of energy; describe what happens to water as it falls on the land areas of the earth; and cite the annual precipitation for the U.S.

Upon completion of the program Human Impact on the Hydrologic Cycle students will be able to: describe the sources of water supply in large cities; describe the regional pattern of water supply; distinguish between water withdrawal and consumption; describe what activities withdraw and consume the most water; cite the per capita domestic use and total water consumption for the U.S.; and describe how people's activities affect the distribution of global water.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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Hydrologic Cycle, continued

INSTRUCTIONAL PREREQUISITES: The program was designed for students at the high school level and above.

CONTENT AND STRUCTURE: This package is one in a series of four packages. The others in the series are: Moisture in the Atmosphere, Ground Water, and Surface Water. It consists of one disk and a supplementary manual. There are two tutorials with specific learning objectives, a true and false quiz and a matching quiz. Supplemental questions and answers are also provided.

ESTIMATED STUDENT TIME REQUIRED: Total time of 2 hours

POTENTIAL USES: Hydrologic Cycle would be useful as a review or as a means to develop vocabulary in high school general science or earth science. It is best-suited for use by an individual or small group. With a large monitor, it can be used in a demonstration mode with large groups to stimulate discussion.

MAJOR STRENGTHS: Graphics are used to enhance instruction and illustrate concepts. User feedback is effective and the program is generally easy for students to use. Error-handling is good.

MAJOR WEAKNESSES: The main weakness of the program is that it cannot be used to instruct an entire class — it is effective only for individual or small group use. Given this condition, a film could be used to present the materials.

OTHER COMMENTS: The DISKCOPY and SETUP required when the program is first used are difficult and confusing for novice computer users. However, these one time procedures allow compatibility across various IBM or compatible hardware products as well as preserve the master disk.

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Earth Science Series: Ground Water

VERSION: 1984

PRODUCER: IBM, Inc.
Personal Computer
Education Software
P.O. Box 1328
Boca Raton, FL 33429-1328
305/998-2000

EVALUATION COMPLETED: May 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $49.00

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Sciences
TOPIC: Earth Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM-PC, PCjr, PC portable, PC-XT or PC-AT, one double-sided disk drive, color monitor
REQUIRED SOFTWARE: PCjr: BASIC cartridge. For others: DOS 2.0 or higher. For all: two blank double-sided, double-density disks
BACKUP POLICY: Make your own backup
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, simulation

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, and follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) Upon completion of the program Ground Water students will be able to: explain the importance of ground water; describe the factors that govern the movement of water into the ground; describe the relationship between soil water, ground water, zone of aeration, zone of saturation and the water table; describe the relationship between height of water table and the occurrence of springs, rivers and wells; describe how a perched water table may form; and distinguish between porosity and permeability.

Upon completion of the program Human Impact on Ground Water students will be able to: explain how pumped wells affect the water table; describe how ground water depletion leads to land subsidence, salt water intrusion, and dried up lakes, rivers and wells; describe the relative efficiency of various rocks in purifying ground

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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Ground Water, continued

water; describe the sources of ground water pollution and their long term significance; and describe the various methods by which ground water levels may be artificially recharged.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Basic knowledge of water cycles is required prior to use of this package. The package is designed for students at the high school level and above with some earth science experience.

CONTENT AND STRUCTURE: This package is one in a series of four packages. The others in the series are: Hydrologic Cycle, Moisture in the Atmosphere, and Surface Water. It consists of one disk and a supplementary manual. There are two tutorials with specific learning objectives, a true and false quiz and a matching quiz. Supplemental questions and answers are also provided in the manual.

ESTIMATED STUDENT TIME REQUIRED: Total time of about 2 hours

POTENTIAL USES: This package would be useful for high school students who need practice with vocabulary words used in ground water study. Individuals or small groups could make use of the program in an environmental education class when the topic of study is ground water contamination. The program might also be used to stimulate discussion or research about contamination and the associated social issues.

MAJOR STRENGTHS: Graphics are effectively used in the program. Error-handling is effective and unexpected student responses will not "crash" the program. Student control of the presentation is good. Quizzes are employed as a tool to provide instruction.

MAJOR WEAKNESSES: There is a limited range of use for this package. The program is really designed for individual or small group use. A good film could do a better job when a teacher needs to work with the entire class.

OTHER COMMENTS: The DISKCOPY and SETUP required when the program is first used are difficult and confusing for the novice computer user. However, these one time procedures allow compatibility across various IBM or compatible hardware products as well as preserve the master disk.The potential for use could be improved by making changes that would make the program suitable for instructing and demonstrating to a large group in a classroom.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Earth Science Series: Surface Water

VERSION: 1984

PRODUCER: IBM, Inc.
Personal Computer
Education Software
P.O. Box 1328
Boca Raton, Fl 33429-1328
305/998-2000

EVALUATION COMPLETED: May 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $49.00

ABILITY LEVEL: Grade 9 through Postsecondary
SUBJECT: Sciences
TOPIC: Earth Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM-PC, PCjr, PC portable, PC-XT or PC-AT, one double-sided disk drive, color monitor
REQUIRED SOFTWARE: For PCjr: BASIC cartridge. For others: DOS 2.0 or higher. For all: two blank double-sided, double-density disks
BACKUP POLICY: Make your own backup
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, simulation

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, and follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) Upon completion of the program Surface Water students will be able to: distinguish betweeen overland flow and stream flow; name two sources of water for streams; define soil erosion; recognize conditions for soil erosion; name reasons for lake formation; explain why lakes are short-lived; describe the most common drainage pattern; describe factors that control the flow of water in streams; define stream gradient; define discharge and how it fluctuates; describe how stream velocity is affected by various stream channels; describe three ways a stream erodes; define load and why a river deposits its load; and define alluvium and how it forms flood plains and deltas.

Upon completion of the program Human Impact on Surface Water students will be able to: describe the changes that take place in a river when a dam is built; describe how and why urbanization affects the discharge and the sediment load of a stream; and describe the types of water pollution produced by mining, urbanization, agriculture, and industry.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3.75, Instructional Characteristics - 3.5, Technical Characteristics - 4.5.

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Surface Water, continued

INSTRUCTIONAL PREREQUISITES: (STATED) The package was designed for students at the high school level and above.

CONTENT AND STRUCTURE: This package is one in a series of four packages. The others in the series are: Hydrologic Cycle, Moisture in the Atmosphere, and Ground Water. It consists of one disk and a supplementary manual. There are two tutorials with specific learning objectives, a true and false quiz and a matching quiz. Supplemental questions and answers are also provided.

ESTIMATED STUDENT TIME REQUIRED: Total time of about 2 hours

POTENTIAL USES: This package is best suited for individual/small group use. With a large monitor, it can be used in a demonstration mode with large groups to stimulate discussion. Its content is appropriate for Earth Science or General Science courses, but the simulation and tutorial modes make it useful mainly as a followup to a teacher's lesson. Another suggested use is for review in an Advanced Science class.

MAJOR STRENGTHS: Students can easily use this package. Graphics are used to enhance the presentation of content. Feedback is useful and quizzes are supportive of desired learner outcomes. The error-handling is good — students can enter unexpected responses without "crashing" the program.

MAJOR WEAKNESSES: The computer coordinator's assistance might be needed. The tutorial/simulation modes used in the software somewhat limit its classroom use. The reviewers agreed that it was only suitable for individual or small group use, independent of classroom activity.

OTHER COMMENTS: The DISKCOPY and SETUP procedures required when the program is first used are difficult and confusing for novice computer users. However, these one time procedures allow compatiblity across various IBM or compatible hardware products as well as preserve the master disk. One reviewer felt that given the choice to use this software, he would decline. The software presents content he would exclude and does not present some material which he includes when teaching this topic. While this is true of all software, he felt that the limited application (individuals/small groups) would add to the content problem and cause him to bypass the product.

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Earth Science Series: Moisture in the Atmosphere

VERSION: 1984

PRODUCER: IBM, Inc.
Personal Computer
Education Software
P.O. Box 1328
Boca Raton, FL 33429-1328
305/998-2000

EVALUATION COMPLETED: May 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $49.00

ABILITY LEVEL: Grade 9 through Postsecondary
SUBJECT: Sciences
TOPIC: Earth Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 128K IBM-PC, PCjr, PC portable, PC-XT or PC-AT, one double-sided disk drive, color monitor
REQUIRED SOFTWARE: For PCjr: BASIC cartridge. For others: DOS 2.0 or higher. For all: two blank double-sided, double-density disks
BACKUP POLICY: Make your own backup
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, simulation

DOCUMENTATION AVAILABLE: In program — program operating instructions, post-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, post-test, teacher's information, resource/reference information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) Upon completion of the program Moisture in the Atmosphere students will be able to: describe how moisture moves into the air; explain why people are uncomfortable on humid days; define humidity; define water vapor capacity; define dewpoint; explain how water vapor capacity varies with air temperature; distinguish between specific and relative humidity; cite two ways a change in relative humidity may occur; describe changes in relative humidity during the course of a day; describe conditions that give rise to frost and dew; and distinguish between radiation and advection fog, and cite examples of these fogs.

Upon completion of the program Clouds and Precipitation students will be able to: describe adiabatic process; describe the role of condensation nuclei; cite three ways in which large volumes of air may be lifted and cooled; describe changes as moist air rises and descends; describe formation of convectional rainfall and thunderstorms; describe the formation of frontal

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4.5, Instructional Characteristics - 3.5, Technical Characteristics - 3.

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Moisture in the Atmosphere, continued

rainfall and thunderstorms; describe how clouds are classified; and describe two theories of raindrop formation.

INSTRUCTIONAL PREREQUISITES: (STATED) This package was designed for students at the high school level and above.

CONTENT AND STRUCTURE: This package is one in a series of four packages. The others in the series are: Hydrologic Cycle, Ground Water and Surface Water. It consists of one disk and a supplementary manual. There are two tutorials with specific learning objectives, a true and false quiz and a matching quiz. Supplemental questions and answers are also provided.

ESTIMATED STUDENT TIME REQUIRED: Total time of about 2 hours

POTENTIAL USES: Individuals or small groups can use this software to develop vocabulary for secondary earth science, general science, or geology classes. With a large monitor, it can be used in a demonstration mode with large groups to stimulate discussion.The package would be appropriate for summarizing and reviewing what was presented in the teacher's lesson.

MAJOR STRENGTHS: Graphics are used effectively to illustrate and instruct. The content/program operation lends itself to a wide range of students ("average" and "below average") for review and vocabulary. User feedback is effective and supportive of instruction. Once the initial setup is completed, students can easily use the package. Error-handling is effective.

MAJOR WEAKNESSES: The package is inappropriate for use with an entire class. The teacher support materials could be improved with suggestions for using the program to develop concepts at a higher level rather than using it to develop recall.

OTHER COMMENTS: The DISKCOPY and SETUP required when the program is first used are difficult and confusing for the novice computer user. However, these one time procedures allow compatibility across various IBM or compatibile hardware products as well as preserve the master disk.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Food Group Puzzles

VERSION: Apple

PRODUCER: Marshware, a Division of
Marshfilm, Inc.
P.O. Box 8082
Shawnee Mission, KS 66208

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95 The entire three diskette Nutrition Series is available for $101.00.

ABILITY LEVEL: Grade 3 through 8
SUBJECT: Health, Home Economics
TOPIC: Nutrition
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor (color recommended)
REQUIRED SOFTWARE: DOS 3.3
PREVIEW POLICY: Materials may be ordered on 30-day memo billing.
INSTRUCTIONAL PURPOSE: Remediation, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To recognize various foods and place them in their proper food group; to know the difference between the food groups; to know the number of daily servings of each of the five food groups; to develop an awareness of the variety and flexibility of food groupings in creating a balanced meal plan; and to develop an understanding of the relationship between good eating habits and good health.

INSTRUCTIONAL PREREQUISITES: (STATED) The student should have prior instruction on the five basic food groups.

CONTENT AND STRUCTURE: This package contains one disk, and a 9-page User's Guide. It is one of a series of three packages which comprise the Marshware Nutrition Series. The disk contains two educational games which utilize 30 individual pictures of foods. In the first, "Sorting Them All Out," the student must place each food in its proper food group. In the second, "Putting Them All Together," the student must create a balanced meal plan by placing the foods in different meal categories.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4 Technical Characteristics - 4.

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Food Group Puzzles, continued

POTENTIAL USES: This package could be used with individual students or small groups of students for review or introduction to food groups and menu planning.

ESTIMATED STUDENT TIME REQUIRED: "Sorting Them All Out" would take about 10 minutes and "Putting Them All Together" would take about 15 minutes.

MAJOR STRENGTHS: The program makes excellent use of graphics for the food items. The programs are easy to operate. The objectives are very clearly stated. The feedback to the user is relevant, non-threatening and timely. The directions are clear and concise.

MAJOR WEAKNESSES: The student is not able to look back at the list of daily recommendations while the game is in progress.

OTHER COMMENTS: The package should be used with a color monitor to make the pictures of the foods more distinguishable.

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Galactic Prospector

VERSION: Apple

PRODUCER: EPCOT Educational Media
Walt Disney Educational
Media Company
500 South Buena Vista Street
Burbank, CA 91521

EVALUATION COMPLETED: October 1985 by the staff and constituents of Montgomery County Public Schools, Rockville, Maryland and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Sciences
TOPIC: Earth Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, color monitor.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Backup provided and guaranteed replacement within 90 days if damaged.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving, game, information retrieval

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To give students a new slant on the subject of energy exploration; to introduce key geology concepts and terms; and to stimulate thinking and discussion on the energy issues of: advantages and disadvantages of each energy source, importance of energy diversity, and others.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk and a 22-page User's Guide. In "Galactic Prospector" the user is confronted with a simulation in which the people of Earth must find a new home due to a shift in the Earth's orbit. As captain of an energy survey ship, the student scouts energy sites on the planet Avatar in the galaxy NRG10. The student conducts geological and meteorological tests and evaluates data to determine what source of energy should be developed, how it should be developed, and in what quantities.

POTENTIAL USES: This package is best used with small groups of students in conjunction with a unit on energy.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 3.

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Galactic Prospector, continued

ESTIMATED STUDENT TIME REQUIRED: Two or three class periods. The package includes a "save game" feature which allows the user to complete the game in multiple sessions.

MAJOR STRENGTHS: In today's world, it is vital that students have a good understanding of energy sources and related issues. This makes the package very valuable educationally. The documentation contains an excellent section explaining the advantages and disadvantages of each of the various energy sources, and a good glossary. The package does a nice job of drawing together the many problems relating to energy resources. The game is an excellent exercise in problem solving that challenges the student to develop critical thinking skills.

MAJOR WEAKNESSES: The package needs a good bit of preparation time to work the package into the curriculum.

OTHER COMMENTS: The package must definitely be used with a color monitor.

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Graphical Analysis II

VERSION: Apple

PRODUCER: Vernier Software
2920 S.W. 89th Street
Portland, OR 97225
Phone: 503/297-5317

EVALUATION COMPLETED: October 1985 by the staff and constituents of Montgomery County Public Schools, Rockville, Maryland and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $24.95

ABILITY LEVEL: Grade 10 through Postsecondary
SUBJECT: Sciences
TOPIC: Data Analysis, Graphing
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Apple II series, one disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Make your own backup
PREVIEW POLICY: All Vernier Software products are available on 30-day preview.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Data analysis, graphing, utility, demonstration

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, student's instructions, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide a means for the user to easily and quickly use graphical methods to analyze experimental data.

INSTRUCTIONAL PREREQUISITES: (STATED) The student must have prior knowledge of how to analyze experimental data using graphic methods.

CONTENT AND STRUCTURE: This package contains one disk and a 22-page User's Guide. The disk contains tools useful in the analysis of experimental data. Major features of the package include: input new data; save and load data tables to and from a disk; merge a data table into memory; display data table on screen; add data to data table; edit data in data table; exchange horizontal and vertical axes; perform linear recursion analysis; calculate slope, intercept and correlation coefficient; plot graph; print hard copy of graph; and set significant figure. Data tables may contain up to 200 data pairs.

POTENTIAL USES: This utility program would be useful in any laboratory or presentation where data would be best presented in the form of a line graph.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
				•	Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
				•	Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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Graphical Analysis II, continued

ESTIMATED STUDENT TIME REQUIRED:
Approxinately 20 to 30 minutes to prepare one graph.

MAJOR STRENGTHS: The documentation is excellent and correlates to several subject textbooks. The package makes good use of the computer's ability to accept and store data, carry out complex calculations and produce graphical presentations. It is an excellent program at the price of $24.95.

MAJOR WEAKNESSES: The package only calculates the line which best fits the data, it does not calculate curves. In merging data from different lab classes, the program calculated one curve for the total data set rather than displaying each set of data on the same graph. The package consists of a set of papers, three hole punched and stapled in the upper left hand corner, and a loose diskette.

OTHER COMMENTS: The author responds to questions about the use of the program in a newsletter.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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GUIDEMASTER – Borrowing: Regrouping for Subtraction

VERSION: Apple, School Version

PRODUCER: Renaissance Learning Systems
701 Hamilton Parkway
Syracuse, NY 13214

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: School version: $44.95
Home version: $29.95

ABILITY LEVEL: Grades 1 through 6
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive, monitor (color recommended), printer (optional for teacher management)
PREVIEW POLICY: The company offers a money back guarantee.
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, drill and practice, game

DOCUMENTATION AVAILABLE: In program – student's instructions. In supplementary materials – suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) The learner will perform borrowing in problems with 2-digit numbers. The learner will gain a meaningful understanding of the regrouping process. The learner will be able to explain conceptually what is taking place in the process of borrowing. The learner will develop speed and accuracy in borrowing. The learner will improve speed and accuracy in the basic subtraction math facts.

INSTRUCTIONAL PREREQUISITES: (STATED) This package is recommended for students with some knowledge of the basic subtraction facts and is designed to be operated by the student with no assistance beyond the initial introduction to the system.

CONTENT AND STRUCTURE: This package contains 3 disks, a 20-page user's manual and a symbols chart. The diskettes include a start-up disk (school version only), a tutorial disk, and a speed game disk. The program begins with an emphasis on the conceptual understanding of the regrouping process. It then provides demonstrations in "how to," followed by a game with 9 difficulty levels designed to help students

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
		•			User support materials are effective.
•					Information displays are effective.
	•	•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 3.

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Borrowing, continued

internalize the skill of regrouping. The program has the capacity to store information on the progress of up to 80 students in up to 6 different classes.

POTENTIAL USES: This package is appropriate for use by individual students at the elementary level.

ESTIMATED STUDENT TIME REQUIRED: It would take approximately 30 to 45 minutes to complete both the tutorial and the game disk. The tutorial disk could be covered in several 5 to 10 minute sessions.

MAJOR STRENGTHS: The graphics and the program format are well done and use an appealing character set. The explanations in the tutorials are very clear. Example problems are demonstrated utilizing a step-by-step approach, a "beep" as each step is shown for emphasis, and color coding of the place value of each digit to make the tutorials more effective. Students are shown several different approaches to borrowing. Practice is provided for each step in the process. If the student makes an error at any step, corrective feedback is provided. The difficulty level of the speed game can be adjusted by the student or the teacher. The program may be used with or without the management system.

MAJOR WEAKNESSES: The user must wait for the SB signal before they can press the space bar to continue, even though they may be ready sooner. It does not allow the user to speed up the tutorial. The program can only be exited at the end of a drill section. If the user makes a typing error, the program counts that problem wrong. It does not allow the user to correct typing errors or have a second chance to type the correct key. It is not obvious that the user must work problems before they can play the speed game. It would be helpful to have that information on the screen when the game is booted. Students are required to change disks several times during the use of the package.

OTHER COMMENTS: When working problems, students must remember to make a slash mark before they put in the number above.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Holt Reading Skills Extender 3

VERSION: Apple

PRODUCER: Holt, Rinehart and Winston
CBS Educational and
Professional Publishing
383 Madison Avenue
New York, NY 10017

EVALUATION COMPLETED: October, 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $249.00. Additional packets of five disks are available for $19.98.

ABILITY LEVEL: Grade 3. The entire series covers grades 3 through 8.
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive and monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Program back up is provided.
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, instructional management
INSTRUCTIONAL TECHNIQUE: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, pre-test, post-test, teacher's information, student's instructions, student worksheets, textbook correlation, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide a means of reinforcing reading skills with individualized, interactive sessions on the computer. A detailed scope and sequence is included in the Teacher's Manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students should have minimal skills in computer operations.

CONTENT AND STRUCTURE: This package is the first in a series which covers reading for grades 3 through 8. It contains a program disk, a backup program disk, a management disk, five skills disks, and a 38 page teacher manual with 20 reproducible blackline worksheets. There are four skill lessons on each disk for a total of 20 lessons. Skills include identifying sequence, main ideas, alphabetizing, homophone and so forth. Lessons consist of four sections: Skill Check, Instruction, Application and Skill Test. Each lesson begins with a diagnostic Skill Check. Students who pass the Skill Check proceed to the

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 4.

Northwest Regional Educational Laboratory
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Reading Skill Extender, continued

next lesson. In the Instruction section, the skill is broken down into a logical sequence. In the Application section, skill concepts are applied to new questions. Before starting Application, students may choose to take the Skill Test. If they pass it, the lesson ends. If they do not pass, they repeat Instruction and go on to Application. Those who do not take the Skill Test immediately have another chance to choose to take it partway through Application, or at the end of the lesson. Two forms of the Skill Test are included, allowing students who do not pass once to repeat the entire lesson and then to take a different Skill Test. A comprehensive management system is included.

POTENTIAL USES: The package could be used by individual students to reinforce basic reading skills. It allows students to proceed at their own pace based on skill level and individual need. This could be used to supplement classroom instruction and provide students the opportunity for extra practice. The management system allows teachers to assign skill lessons, collect scores, view and print reports about students' work. Class and individual reports may be made by skill or strand. Students individually or in a group use the computer sequentially changing disks from Skill disks to Management disks to record their progress.

ESTIMATED STUDENT TIME REQUIRED: Individually, twenty minutes for a complete lesson including a skill check, instruction, application and skill test. There are 20 lessons.

MAJOR STRENGTHS: This package offers a complete program: diagnosis, prescription, instruction, evaluation. Skills are broken down very specifically, yet the management system allows the teacher to keep track of both individuals and groups. The manual provides a useful scope and sequence table. The graphics in the instruction sections would be appealing to a third grader. Examples are always given before students take tests. The teacher's manual is comprehensive and easy to understand as well as the "Tips for Users" sheet. The blackline masters are a helpful addition. This package provides remediation on skills that are not just a reiteration of the pretests. The skills are presented on the disks in the order they appear in the Holt Basic Reading Series, although they can be assigned to students in whatever order is best suited to each individual's needs.

MAJOR WEAKNESSES: This package would take time to set up properly which may deter less enthusiastic teachers. It may actually be difficult to implement in a classroom with limited reading periods as it could take several days for members of a small group to sequentially work through the same lesson using one computer. The teacher can't modify default Skill Check values. This package requires disk switching by student or teacher to track progress.

OTHER COMMENTS: This package would be very beneficial where teachers are willing to take the time needed to become familiar with the package and set it up correctly. Correlations of Reading Skills Extender to each of the major basal reading programs are also available at no charge.

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Hometown

VERSION: Apple

PRODUCER: Active Learning Systems
PO Box 1984
Midland, MI 48640
(517) 835-7051

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $148.00. Volume discounts available.

ABILITY LEVEL: Grade 5 through postsecondary
SUBJECT: Social Studies
TOPIC: Civics, Local Affairs
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor, Centronics printer (optional). Also available for Commodore 64, IBM-PC, and 64K Microbee.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: The program disk may not be copied. Data disks may be copied.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUE: Problem solving, information gathering and retrieval

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To encourage the feeling of "Let's get involved in our community." To discover a local area- its geography, landforms, character, functions and potential. To look at the past, present and future, to discover who are the people in a specific "Hometown." To look at short and long term needs, and how interdependent are local areas.

INSTRUCTIONAL PREREQUISITES: (STATED) Student will need to follow basic computer directions to store, search for data, sort and perform simple statistical calculations.

CONTENT AND STRUCTURE: This package contains one program disk, one data disk which may be copied, and a manual. The manual contains teacher notes, a step by step guide and reference manual, and reproducible student worksheets. Also included are helpful database codes and glossary. This package is designed to be used as a part of a specific demographic study to facilitate the collection, storage, and analysis of necessary information. The computer is used as a tool to store information students collect in field surveys. The data disk stores information

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
•					Instruction integrates with prior learning.
•					Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 4.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
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Hometown, continued

which is determined by the user. This data can then be searched and analyzed, and a statistical summary and other "reports" may be obtained. Some skills used in the package include recording information, interpreting results, researching, investigating, and map reading. Worksheets are divided in six units which involve surveying, questioning, entering data, and interpreting data.

POTENTIAL USES: This package may be used by any size group of students entering data. This package could be used for a unit which utilizes data collection and analysis of polled data.

ESTIMATED STUDENT TIME REQUIRED: This unit of study is designed for a whole class to cover a period of several weeks. Many activities must be completed before the computer program may be used.

MAJOR STRENGTHS: This package is extremely adaptable to many different teaching situations. This is a major project to undertake; however, the manual literally takes the teacher by the hand. Lesson plans are clearly presented and the worksheets are helpful. After basic data is entered, students can easily manipulate the data to draw conclusions about their "Hometown", be it a community or even a school. The database for summarizing and analyzing data is easy to use and has effective error trapping.

MAJOR WEAKNESSES: This package doesn't use graphics or sound. Graphics, especially pie or bar graphs to illustrate student findings, would be helpful.

OTHER COMMENTS: The database program is specifically designed for this unit of study. The package needs to be evaluated and chosen based on the off-computer activities as the computer portion (analyzing data collected in a survey) is a minor portion of the package.

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How a Bill Becomes Law

VERSION: Apple

PRODUCER: Intellectual Software
798 N. Avenue
Bridgeport, CT 06606

EVALUATION COMPLETED: November 1984 by the staff and constituents of Connecticut Department of Education, Hartford, Connecticut and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Social Studies
TOPIC: Government
MEDIUM OF TRANSFER: 5-1/4 inch disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor. Also available for IBM-PC or PCjr and Apple MacIntosh.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, game, simulation

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary material — instructional objectives, program operating instructions, teacher's information, resource/reference information.

INSTRUCTIONAL OBJECTIVES: (STATED) To help the student gain an understanding of the legislative and political process.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Prior instruction on the legislative process.

CONTENT AND STRUCTURE: This package contains one disk and a 14-page Teacher's Guide. Students become Congresspeople trying to get bills passed in the U.S. Congress. Students learn about the legislative system, lobbying, filibusters, subcommittees, quorums, House-Senate committees, motions to table, parlimentary procedure, senatorial courtesy, seniority, amendments, vetos and overrides.

ESTIMATED STUDENT TIME REQUIRED: 10-90 minutes

POTENTIAL USES: This package could be used as a supplementary exercise for a unit on how federal laws are made. Students can work as individuals or in teams.

MAJOR STRENGTHS: The program concept is excellent. It makes a nice review of facts about how a bill becomes a law. The storyline, with the user as the central decision-maker, is very motivational.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
		•			Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
•					Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale 5 (High) to 1 (Low)
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 3.

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How A Bill Becomes A Law, continued

MAJOR WEAKNESSES: It is difficult to recall previous sections in order to review errors. The correct answers are hidden in subsequent statements of the storyline; it is not always clear what the correct answer is. The package is very interactive but lacks student control.

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How to Weigh an Elephant

VERSION: Apple

PRODUCER: Learning Technologies, Inc.
4255 LBJ Freeway, Suite 131
Dallas, TX 75244

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $29.95

ABILITY LEVEL: Preschool through grade 3
SUBJECT: Mathematics
TOPIC: Measurement
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor (color preferred)
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Problem solving, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop an understanding of: properties of weight/mass and liquid volume, ordering and sequencing, observation and predicting outcomes, and cause and effect relationships.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one diskette and a three-page manual. Three games are included on the disk. In "How to Weigh an Elephant", three animals each take a boat ride. The user must determine the relative weight of each animal by observing how low the boat floats in the water. In "The Juice Drinking Race", the user must differentiate liquid volume by discovering which animal empties its glass first. In "The Panda Workout", the user must give the panda a workout by sequencing a series of exercises.

POTENTIAL USES: This package could be used by individual students or small groups of students to reinforce concepts of relative weight, different liquid volumes, cause and effect, and sequencing.

ESTIMATED STUDENT TIME REQUIRED: 10 to 15 minutes per game

MAJOR STRENGTHS: This package is very colorful and would be exciting and motivating for primary students. Each activity is short and would keep the attention of young children. It gives lots of positive reinforcement for correct responses. Students could easily and independently change from one activity to another. The teacher has the option of turning the sound on or off. The manual is very easy to read and directions are simple. This is a very clever way to reinforce the designated concepts.

MAJOR WEAKNESSES: "The Panda Workout" moves a little too quickly for primary children. It is not mentioned in the documentation that the student instructions at the bottom of the screen may vary. This confuses some students.

OTHER COMMENTS: The graphics in "The Juice Drinking Race" are hard to read on a non-color monitor.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 4.

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Internal Journey

VERSION: Apple

PRODUCER: Epcot Educational Media
Walt Disney Educational Media Co.
500 Buena Vista Street
Burbank, CA 91521

EVALUATION COMPLETED: July 1985 by the staff and constituents of Jefferson County Schools, Lakewood, Colorado, and Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95

ABILITY LEVEL: Grade 7 through Postsecondary
SUBJECT: Sciences, Health
TOPIC: Life Science, Biology, Nutrition
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+ or IIe, single disk drive, monitor (color recommended)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Backup provided and a guarantee of replacement if damaged within 90 days.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop an understanding of the digestion process and the relationship between digestion and nutrition; to encourage the development of research skills.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Prior instruction on the digestive process, food groups, and nutrients. Access to appropriate resource materials containing information about the digestive system and nutrition.

CONTENT AND STRUCTURE: This package contains one double-sided diskette, a backup diskette, and a 23-page User's Manual. The disk provides an adventure game where the user joins the explorer, Winston, and his dog, Woofer, on a microscopic journey through the human digestive system. Winston and Woofer need help to direct the digestion and absorption process and to solve the mystery of what type of food is traveling through the body. Winston asks the user questions about the digestion process and relays correct answers to the brain control center. Two levels of play are available. The program also includes a "save game" feature.

POTENTIAL USES: This program could be used by individual students or small groups to review digestion/physiology or as an extra credit assignment. The package is not intended to be a source of information about the digestive system. Rather, it provides a problem-solving setting where students must research the information from other sources in order to be successful at the game.

ESTIMATED STUDENT TIME REQUIRED: Two hours per level maximum.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
		●			Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
		●			Package achieves defined purpose.
				●	Content presentation is clear and logical.
		●			Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
				●	Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
		●			Users can operate easily and independently.
		●			Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 2, Technical Characteristics - 3.

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Internal Journey, continued

MAJOR STRENGTHS: The package is very colorful and definitely encourages the development of research skills.

MAJOR WEAKNESSES: An option to turn off the sound needs to be available for use in the classroom. When the student does not know the correct answer, better and different hints are needed.

OTHER COMMENTS: Level 1 is intended for use at the junior high school level. Level 2 is for use at the high school or college level. Most junior high school texts cover the major enzymes, but not to the extent necessary for the use of this package. Other reference materials are needed. It would be helpful if the documentation included a glossary of terms used in the program.

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Law in American History

VERSION: Apple

PRODUCER: Intellectual Software
798 N. Avenue
Bridgeport, CT 06606

EVALUATION COMPLETED: September 1985 by the staff and constituents of Connecticut Department of Education, Hartford, Connecticut and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $45.00

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Social Studies
TOPIC: History, Law
MEDIUM OF TRANSFER: 5-1/4 inch disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor, printer (optional). Also available for TRS-80 Model III or IV, IBM and Commodore 64.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, simulation

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary material — program operating instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To help with the study of American History by stimulating the students' reasoning skills.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk and a 10-page Teacher's Manual. The program is a collection of seven tutorials, exercises, or simulations. They include: The Case of Peter Goodman, an exercise to stimulate students' reasoning skills, drawn from the history of Plymouth colony in New England in the 1630's. Concepts of religious freedom and social control are presented in a problem-solving format. Intolerable Acts is a tutorial designed to help the student understand the role of new British laws in the pre-revolutionary period. The Bill of Rights presents the student with a series of actual cases. The students can access the Bill of Rights through a computer database and use what they find to explain each of the 20 cases. Vigilante Mock Trial is a complete, computer-managed simulation of a trial from 1859 in the American west. Students form into two teams, one for the prosecution and one for the defense; each team interviews witnesses, puts them on the stand, and asks questions in court. Case Study: Brown vs. Board of Education presents students with the facts of this landmark case and leads them through the classic

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
		●			Purpose of package is well defined.
		●			Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
		●			Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
		●			Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
			●		User support materials are comprehensive.
			●		User support materials are effective.
			●		Information displays are effective.
		●			Users can operate easily and independently.
		●			Teachers can employ package easily.
		●			Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale 5 (High) to 1 (Low)
Content - 4, Instructional Characteristics - 2, Technical Characteristics - 1.

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Law in American History, continued

case-study method. They identify the legal issues involved, relate them to the Constitution, examine precedents, and finally render an opinion. A database of relevant Constitutional phrases and precedents is available for research by the students. Case Study: Tinker vs. Des Moines is similar in form to the Brown case, but involves Constitutional rights in school. A research database and complete printout is accessible through the computer. Sex Discrimination Mock Trial is a modern case taken from a federal appeals court, and arranged as a computer simulation for two teams of students. It is similar in format to the vigilante mock trial described above. All 7 activities are on one disk and all have an easy print feature for a hard copy of all student responses.

ESTIMATED STUDENT TIME REQUIRED: Variable; depending upon the activity. Perhaps 15 to 90 minutes each.

POTENTIAL USES: This package could be used for individual or group work as part of a unit on development in American Law.

MAJOR STRENGTHS: The program is very interactive. The hard copy capability is helpful. The package is flexible, offering a selection of activities. Some activities are stronger than others. The actual Supreme Court cases are good.

MAJOR WEAKNESSES: The screens are all upper case text and not laid out with much variety. The package makes no use of graphics, color or sound. The programs have many spelling errors. The mock trial operator control was erratic. The support materials are lacking vital information, such as: instructional objectives, grade level indicators, textbook correlation, and suggestions for classroom use. The instructions to the student are unclear. If a printer is not used, certain portions of the program are unavailable to the user without appropriate notification in the documentation.

OTHER COMMENTS: If revised technically, this piece of software would be excellent.

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The Magic Cash Register

VERSION: Apple

PRODUCER: Avant-Garde Creations
P.O. Box 30160
1907 Garden Avenue
Eugene, OR 97403

EVALUATION COMPLETED: September 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $34.95

ABILITY LEVEL: Grades 3 through 6
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II series, one disk drive, monitor (color recommended), printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, simulation

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions, skill report. In supplementary material — program operating instructions, teacher's information, resource/reference information.

INSTRUCTIONAL OBJECTIVES: (STATED) To practice math facts in a real or natural setting; to introduce the basic concepts of running a store, using a cash register, and handling money.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Knowledge of the basic math facts.

CONTENT AND STRUCTURE: The package includes a disk, a story booklet, play money master, and an instruction folder. A tutorial orients the new user to the cash register. Users set up a store, calculate purchases, make change, and print receipts. If the user chooses, he/she can get analysis and help from a friendly wizard. The program will record and print a summary of skills.

ESTIMATED STUDENT TIME REQUIRED: Ten to twenty minutes per session, depending upon the number of transactions the student completes.

POTENTIAL USES: This package is best used with individual upper elementary students as a tutorial and practice lesson in conjunction with a unit on money. The package could also be used as a demonstration tool.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale 5 (High) to 1 (Low)
Content - 3, Instructional Characteristics - 4, Technical Characteristics - 3.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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The Magic Cash Register, continued

MAJOR STRENGTHS: The graphics are appealing and enhance the program. The students have a lot of input into the program. They can enter any item they wish and set their own prices. The step-by-step demonstrations are clear and logical. If the student makes a mistake, the program analyzes the error and provides the appropriate response. The student then has the opportunity to correct the error.

MAJOR WEAKNESSES: The teacher would need to go through the program step-by-step with younger students the first time for them to become familiar with the operation of the program. At certain times, the wizard's magic wand points one way and the student's responses appear in another place. This could be confusing for younger students.

OTHER COMMENTS: The program accesses the disk frequently during use.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Math Power Program: Whole Numbers

VERSION: Apple

PRODUCER: Instructional/Communications Technologies, Inc.
10 Stepar Place
Huntington Station, NY 11746

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $160.00

ABILITY LEVEL: Levels 1 through 6
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student record sheet master.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide tutorial assistance and structured drill and practice in the area of addition, subtraction, multiplication and division of whole numbers. The documentation includes a detailed scope and sequence.

INSTRUCTIONAL PREREQUISITES: (STATED) Students should be given a brief orientation to the use of the program and the computer. An outline of the contents of this orientation is given on page 16 and 17 of the documentation.

CONTENT AND STRUCTURE: This package contains 4 diskettes; 1 each for addition, subtraction, multiplication, and division; and an 18-page Teacher's Guide. It is the first in a series of three packages. The other packages cover fractions and decimals/percents. Each diskette contains from 14 to 19 tutorial and drill/practice lessons as well as a management system. The initial levels on each disk provide drill and practice with the basic facts. Subsequent levels are tutorial in nature, but may be used solely as drill at the discretion of the teacher.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 4.

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Math Power Program, continued

POTENTIAL USES: This package is best used by individual students performing at grade levels 1 through 6 for remediation.

ESTIMATED STUDENT TIME REQUIRED: This package should be used about 15 minutes a day until the student has mastered the material. The number of such sessions would vary depending upon the student.

MAJOR STRENGTHS: The objectives are clearly outlined in the documentation which gives a scope and sequence for each of the four operations. Each lesson has a tutorial which a student could do without any previous instruction. The programs are self-directing and self-correcting. Concepts and steps are reviewed frequently. Math vocabulary is incorporated into the tutorials. Recordkeeping is available which is capable of tracking one hundred students. Additional support materials such as activity books, filmstrips, pre-tests, and post-tests are available separately.

MAJOR WEAKNESSES: The pace of the package is slow which limits its use to remedial students. Although immediate feedback is provided, the overall effect is a bit dull and not very motivating.

OTHER COMMENTS: Practice exercises are grouped in sequences of ten problems. If the student does not meet the completion criteria set by the teacher, an additional ten problems are presented. The method used to teach addition and subtraction facts from 11-18 differs from that of some basal math texts. It would be helpful if the teacher controlled the number of problems presented.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Math Worlds: Exploring Math with Computers

VERSION: Apple

PRODUCER: [illegible]CH Educational Software
[illegible] Spring Street
Lexington, MA 02173

EVALUATION COMPLETED: January 1985 by the staff and constituents of Oakland ISD, Pontiac, Michigan, and Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $249.95

ABILITY LEVEL: Grades 6 through 9
SUBJECT: Mathematics
TOPIC: Algebra, Geometry, Statistics, Probability, Graphs
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 32K Apple II, II Plus or IIe, disk drive, monitor. Also available for 64K IBM-PC and PCjr, disk drive, monitor and color graphics board; and 16K PET (2000 or 4000 series), Commodore 64, and Acorn with single disk drive and monitor.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3. IBM: MS DOS 1.1, 2.0 or 2.1
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills/activities, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop student's abilities to recognize and describe patterns using mathematical concepts as a tool; to make predictions using sampling and simple probability concepts; to develop students abilities to draw inferences from data working with scatter plots and bar graphs; and to have students apply principles of symmetry and geometry to create pictures using a turtle graphics language.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students need to be functioning at or above the sixth grade level.

CONTENT AND STRUCTURE: This package consists of five diskettes, a 273-page teacher's guide, design cards, inservice guide, Cosmic Explorers Handbook and Turtletractor. Exploring Mathematics with Computers uses a capture student/student learn approach. This is accomplished by teaching with manipulatives,

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 3, Technical Characteristics - 3.

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Math World, continued

first to encourage student exploration, then using the computer to randomly generate the simulation situations. Students learn about algebraic functions by getting involved with a language called EASY SPEAK where they are able to work with conditional statements and input/output machines. Sampling and probability concepts become real problem-solving tools if the student can use them to schedule television prime time shows, competing against computer-generated schedules. Scatter plots and bar graphs take on a new meaning when students can use them to explore the demography of the population of an alien planet "UGIZI". Students can apply principles of geometry and symmetry using a turtle graphics language. The TURTLETRACTOR included in each package, and for sale separately for $1.95, gives the students a durable plastic device to measure distance and angles useful in the turtle graphics program.

ESTIMATED STUDENT TIME REQUIRED: One class period in a lab for 3 to 5 days, depending upon which programs are to be used.

POTENTIAL USES: Programs in this package can be used for middle school students in general math courses. Some programs would appeal to students who have only basic skills while others could be used for "gifted" students. The wide range of use makes it flexible — teachers can also draw from the blackline masters for supporting activities.

MAJOR STRENGTHS: There are a variety of programs contained in this package. The availablity of the blackline masters is a plus. They are useful without the software, as are the teaching suggestions.

MAJOR WEAKNESSES: The "Turtleworks" program is similar to Logo, but a few of the commands are different. This would be confusing to those students who have used Logo. While the print materials are helpful, one reviewer felt that they could be improved — they aren't comprehensive. Another reviewer felt that most teachers wouldn't sift through the print material in an effort to use the software. Throughout the unit, the student is told when they give a wrong response, but are never told the correct answer or given the appropriate strategy.

OTHER COMMENTS: The reviewers suggested that an inservice would be needed to introduce teachers to the software and lead them through the print materials provided.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Microcourse Mathematics: Solving Story Problems – Whole Numbers, Levels 3-6

VERSION: Apple

PRODUCER: Houghton Mifflin
TSC Division
Box 683
Hanover, NH 03755
603/448-3838

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $348.00

ABILITY LEVEL: Grades 3 through 6
SUBJECT: Mathematics
TOPIC: Arithmetic, Problem Solving
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple IIe or IIc, one disk drive, monitor. Also available for 128K DEC Rainbow 100 or 100T, and 128K IBM-PC or PCjr.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3. Rainbow: DEC DOS 2.05.
BACKUP POLICY: Backup disk provided
PREVIEW POLICY: 30-day preview with purchase order
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment

INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, instructional management

DOCUMENTATION AVAILABLE: In program — sample program output, student's instructions. In supplementary materials — suggested grade/ability level, sample program output, program operating instructions, pre-test, post-test, teacher's information, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To supplement classroom instruction in the area of solving story problems involving whole numbers.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Prior instruction on the concepts covered on each disk.

CONTENT AND STRUCTURE: This package is part of a series of packages which together cover story problems involving whole numbers, fractions, decimals and geometry for levels 3 through 8. Whole Numbers, Levels 3 through 6 contains 20 disks and a 26-page user's guide. It consists of the following components: Survey Test, Skill Practice and Tutorial, and Post Test. The Survey Tests are used to evaluate proficiency in solving story problems and to diagnose areas of weakness. The surveys are computerized versions of the IPSP tests developed as part of the Iowa Problem Solving Project.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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Solving Story Problems, continued

In the Skill Practice and Tutorial section, a skill is the basic curriculum unit in the programs and consists of five problems organized along three dimensions: Polya's four steps, the computational area (whole numbers), and the arithmetic operation. Polya's method of solving problems involves: 1) get to know the problem, 2) complete a plan to solve the problem, 3) solve the problem, and 4) look back at the solution.

The Post Test is available to evaluate understanding of the skills already mastered. To manage the series, a combination of computer recordkeeping and printing progress records programs are provided.

POTENTIAL USES: This package is designed for use with individual students to diagnose their weaknesses, provide practice and tutorials for skills, and to measure mastery.

ESTIMATED STUDENT TIME REQUIRED: Each skill would take approximately 10 to 15 minutes.

MAJOR STRENGTHS: The skills are broken down very specifically. The pretest and posttest options are very helpful for the teacher. In the survey test, demonstration problems and practice problems are given before the test. In the practice sets, the program highlights key parts in the problem when an incorrect answer is given. After several incorrect answers, the correct answer is given. The user can easily exit the program at any point. Both the program sets and the manual are very comprehensive. The package is well organized and consistent throughout. The two teacher commands which allow a PREVIEW of skills content and REPORT the results of the last two sessions are a nice addition to the program.

MAJOR WEAKNESSES: It would be helpful if the students' pretest, posttest and practice results could be recorded permanently so that they could be retrieved later by the teacher. More use of sound and graphics would add to the students' interest in the program. All of the skills are set up in the same format which gets boring after several skills have been covered. It would be nice if the teacher could change the names and settings to make the problems a little more interesting and personal. Students are restricted in their response to questions.

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Modeler: Molecular Design Editor

VERSION: Apple

PRODUCER: COMPress
A Division of Wadsworth, Inc.
P.O. Box 102
Wentworth, NH 03282

EVALUATION COMPLETED: October 1985 by the staff and constituents of Montgomery County Public Schools, Rockville, Maryland and the Northwest Regional Educational Laboratory, Portland Oregon.

COST: $75.00 for the first purchase. Additional disks available for $10.00 per disk.

ABILITY LEVEL: Grade 11 through Postsecondary
SUBJECT: Sciences
TOPIC: Chemistry
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3 and data disk for storing the various molecular models.
BACKUP POLICY: Backup provided. Replacement disks available after the 90-day warranty period for $10.00.
PREVIEW POLICY: 30-day preview with purchase order.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, demonstration

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide a tool which will allow the user to create a molecular model on the computer screen, save the model on the disk, and rotate the model by any angle from any of the three axes.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The user must be familiar with the structures of molecules.

CONTENT AND STRUCTURE: This package contains one disk and a 46-page User's Guide. The MODELER: Molecular Design Editor is an integrated program system for creating, modifying, and displaying electronic ball-and-stick models of polyatomic molecules. The user enters the molecular structure formula. The program "understands" the formula and draws a three-dimensional ball-and-stick model of the molecule on the computer graphics screen. In "Snapshot" mode, the model is shown in a static position. In "Slide" mode, the model may be rotated in slow motion about a given axes. In "Animation" mode, the model of the molecule is moved dynamically, with real-time rotations under keyboard control. A utility feature allows the user to store numerous molecular models on a data disk.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
•					Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 5, Technical Characteristics - 5.

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Modeler: Molecular Design Editor, continued

POTENTIAL USES: It could be used by the teacher to quickly and easily demonstrate three-dimensional molecular models. This package could be used by students wishing to verify their own ball-and-stick models or to explore molecular structures.

ESTIMATED STUDENT TIME REQUIRED: Students can create and view a compound within 5 to 10 minutes, but will want to engage in longer "what if..." exercises.

MAJOR STRENGTHS: The logic of the commands is very clear yet allows very sophisticated modeling. The use of graphics is fantastic. Students can create almost any compound. They can even make up their own since the program checks for valid Lewis structures.

MAJOR WEAKNESSES: The program rotates entire molecules but does not demonstrate the rotation of individual atoms within the molecules. The program does not have a screen dump to printer capability.

OTHER COMMENTS: On-screen instructions are not very clear and require the user to frequently refer to the documentation. However, once the commands are learned, they have few problems using the package.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Operation Frog

VERSION: Apple

PRODUCER: Scholastic, Inc.
P.O. Box 7502
2931 East McCarty Street
Jefferson City, MO 65102

EVALUATION COMPLETED: September 1985 by the staff and constituents of TIES, Roseville, Minnesota, and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95. Lab pack with five program disks $89.95.

ABILITY LEVEL: Grades 4 through 10
SUBJECT: Sciences
TOPIC: Biology
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive, color monitor, joystick or mouse (optional). Also available for Commodore 64.
REQUIRED SOFTWARE: DOS 3.3
BACK UP POLICY: Backup included with package
PREVIEW POLICY: Full refund if returned within 30-days
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Tutorial, simulation, problem solving, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To familiarize children with anatomy: and to reinforce actual laboratory skills.

INSTRUCTIONAL PREREQUISITES: (INFERRED) A basic understanding of the structure and function of the major organs of the body, and an understanding of dissection procedures and tools.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, and a 47-page teacher's guide. Operation: Frog is a simulated frog dissection program. In the first part of the program, the student must use simulated surgical scissors, probe, pins, and forceps to remove the organs of the frog and place them on the dissection tray. The magnifying glass can be used to call up an information file on any of the organs removed. In the second part of the program, the student is challenged to put the frog back together. If the reassembly is successful, the frog comes to life and hops off of the table.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 4.

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Operation Frog, continued

POTENTIAL USES: This package could be used effectively by individual students, small groups of students or as a classroom demonstration. The package was not intended to replace the actual lab dissection experience, but rather to enhance it. It should only be used to replace the lab dissection experience in cases where the real dissection is impossible, as in makeup work. It would make a nice pre-lab or post-lab activity. During the lab it could be made available as a resource.

ESTIMATED STUDENT TIME REQUIRED: A classroom demonstration of the dissection could take up to 90 minutes. An individual student would need 30 to 60 minutes. To complete all parts of the program would take as many as three class periods.

MAJOR STRENGTHS: The content is definitely accurate and simulates the dissection process rather well. The package is especially valuable if used before, during and after the real dissection. Students liked the graphics and the interest level during use was very high. The information provided upon examination of an organ with the magnifying glass is brief and easy to read. The animated system pictures are also well done. The user handbook is well laid out and instructions are especially clear. One comment from the students was common, "It smells much better and won't ruin your lunch!"

MAJOR WEAKNESSES: The "beep" which tells the user that they have successfully used one of the instruments frequently cannot be heard. It would be helpful if the "beep" were louder.

OTHER COMMENTS: The use of the package is much better with a mouse or joystick. Keyboard input is very tedious and distracting for the student.

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PAVE – Perceptual Accuracy/ Visual Efficiency Training

VERSION: Apple

PRODUCER: Instructional/Communications Technologies, Inc.
10 Stepar Place
Huntington Station, NY 11746

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $80.00

ABILITY LEVEL: Grade 1 through Postsecondary
SUBJECT: Language Arts
TOPIC: Reading, School Readiness
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.3
BACKUP POLICY: Backup included
INSTRUCTIONAL PURPOSE: Remediation, readiness
INSTRUCTIONAL TECHNIQUES: Drill and practice, assessment, game

DOCUMENTATION AVAILABLE: In program — Pre-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, pre-test, teacher's information, resource/reference information, student record sheet master.

INSTRUCTIONAL OBJECTIVES: (STATED) To build more rapid number and letter recognition: to acquire proper spatial orientation, to acquire the visual/functional skills that underlie effective reading and learning; to build proficiency in seeing, remembering and transferring alpha-numeric data.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The program assumes students can read certain prompts and locate certain keys on the keyboard.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, planning and record forms, and a 21-page Teacher's Guide. The programs provide "scanning" and "flashing" activities to help students develop high levels of accuracy in recognizing numbers and letters, as well as proficiency in the visual skills required for fluent silent reading. One disk contains 62 game-like identification and tracking lessons involving numbers and upper and lower case letters. Each lesson provides 5 Visual Efficiency (scanning) activities and 10 Perceptual Accuracy (flash) exercises.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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PAVE Program, continued

POTENTIAL USES: This package would be best suited for use with individual, lower achieving students. It is also useful as a reading readiness activity

ESTIMATED STUDENT TIME REQUIRED: Ten minutes per day for approximately 15 days

MAJOR STRENGTHS: The package includes a pre-test to determine the appropriate level of difficulty, but teachers may change the level that is automatically assigned if they feel an individual needs more or less practice. The package may be used by a wide range of students. Students starting at a lower level receive immediate feedback (reinforcing tone) and extra prompts. As the student masters one level, training progresses to a more difficult level. If a student is having trouble, the program automatically goes to an easier level. The graphics are very clear and easy to read. Recordkeeping capabilities provide teachers with reports on student progress.

MAJOR WEAKNESSES: The manual is necessary for an understanding of the basic operation of the program. The students need to have training with the program before they can operate it independently.

OTHER COMMENTS: The skills covered in this package are a prerequisite to many important areas of learning (reading, math, spelling).

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Physical Science Databases for PFS:File

VERSION: Apple

PRODUCER: Scholastic, Inc.
P.O. Box 7502
2931 East McCarty Street
Jefferson City, MO 65102

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland Oregon.

COST: $99.95

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Science
TOPIC: Physical Science, Chemistry
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple IIe or IIc, two disk drives, monitor, printer. (Some of the activities can be used with no printer and only one disk drive.)
REQUIRED SOFTWARE: PFS:File and PFS:Report for Apple IIe or IIc (PFS:Graph is optional)
BACK UP POLICY: Backup included with package
PREVIEW POLICY: Full refund if returned within 30-days
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Information retrieval, problem solving

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities. More detailed objectives are given for each activity.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach students how to use data files and how to build their own. To provide an opportunity to explore the topics of: chemical elements, common substances, chemical tests, glues and adhesives, and stains and solvents.

INSTRUCTIONAL PREREQUISITES: (STATED) Use of the package requires a prior understanding of databases, and in particular the PFS:File and PFS:Report systems. The package includes instructions for the use of both of these systems.

CONTENT AND STRUCTURE: This package contains three copies of each of two disks, and an extensive 248-page manual. The package is made up of a teacher's guide, three units involving using existing databases, two units involving the creation of a database, a quick guide for use of the PFS series, mini-references for PFS:File and Report, and a glossary/appendix. The units are as follows.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
	•	•			Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 3.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Physical Science Databases, continued

CHEMICAL ELEMENTS contains 8 exploratory activities using a prepared database containing the atomic number, mass, period, group, melting point, boiling point, and 16 other properties of 75 common elements.

COMMON SUBSTANCES contains 8 exploratory activities using a prepared database containing the density, melting point, boiling point, solubility, heat content, and hardness of 70 common compounds.

CHEMICAL TESTS contains 8 exploratory activities using a prepared database containing the results of the flame, acid, starch, and borax bead tests on 50 common substances.

GLUES AND ADHESIVES contains 8 activities where students create and explore a database of information on the properties of various glues and adhesives.

STAINS AND SOLVENTS contains 8 activities where students create and explore a database on the properties of various stains and solvents.

POTENTIAL USES: This program could be used with small groups of students or as a classroom demonstration where large amounts of data are analyzed. It is best used to develop the process skills of science rather than the content matter contained in the files.

ESTIMATED STUDENT TIME REQUIRED: Each activity can be completed in about 30 to 45 minutes. Suggested activities for further study would involve more time.

MAJOR STRENGTHS: The purpose of the package is to teach the student how to use the data retrieval capabilities of the computer to analyze and test hypotheses. The contents of the files are almost incidental to the process. The package does a good job of teaching these highly transferrable skills. The manual contains very clear instructions both for the use of the computer and the activities in general.

MAJOR WEAKNESSES: The PFS:File program does not provide for the use of subscripts which makes many of the chemical formulas very confusing. Some of the searches using PFS:File take a very long time to complete. Some students would lose interest in the package. The package places too much emphasis on the mechanics of using the software and not enough emphasis on the interpretation of the results.

OTHER COMMENTS: The exploratory nature of this package requires close teacher monitoring and direction to insure development of analysis and interpretation skills. It is very easy for the student to contaminate the data on the disk inadvertently. It is important that the teacher copy the data files from the master disk to the student disks prior to use.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Problem Solving in Algebra

VERSION: Apple

PRODUCER: Encyclopaedia Britannica
Educational Corporation
425 Michigan Avenue
Chicago, IL 60611

EVALUATION COMPLETED: December 1984 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $299.00, with backup diskettes $349.00

ABILITY LEVEL: Grades 9 through 12
SUBJECT: Mathematics
TOPIC: Algebra, Problem Solving
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, single disk drive, monitor. Also available for 48K TRS-80 Model I, III and IV.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — instructional objectives, prerequisite skills or activities, teacher's information, student worksheets.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop skills in the areas of: functions, variables, number sentences, equality, translating verbal and math sentences, solving equations, and systems of equations. Detailed objectives and prerequisites for each of the 38 lessons is given in the documentation.

INSTRUCTIONAL PREREQUISITES: (STATED) Prior instruction on the concepts stated above.

CONTENT AND STRUCTURE: This package contains five disks and a 24-page teacher's manual. The five disks contain 38 lessons which are based on a programmed learning approach to solving verbal problems. The student is first given practice in translating the same algebraic expression into words in more than one way. In this way, he or she learns to appreciate the variety of verbal expressions that can be represented by the same mathematical symbols. The student is then led through the process of translating word phrases into algebraic expressions. The amount of assistance given the student gradually decreases within each lesson. Eventually, the student will be translating word problems into equations and completing the solutions. Early in the program, the student will also translate problems into two simple equations in two variables and solve the system by

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
			•		Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 1, Technical Characteristics - 3.

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Problem Solving in Algebra, continued

substitution. Therefore, when a problem consists of more than one sentence, each sentence can be translated into an associated algebraic statement, which reduces the complexity of the task for the student.

ESTIMATED STUDENT TIME REQUIRED: Total time of approximately 19 hours

POTENTIAL USES: Reviewers mentioned that the package might be used for remediation or review of previously taught content. One reviewer felt that the software could be used in a small group setting.

MAJOR STRENGTHS: The package is easy to use. The topics addressed in the package fit a broad range of traditional algebra curriculum areas.

MAJOR WEAKNESSES: The software allows users to progress through the presentation even when incorrect answers or responses are supplied. No remediation is provided when students answer incorrectly or cannot answer questions. Some lessons (e.g., Lesson 20) offer very little practice. Feedback is not motivating or imaginative.

OTHER COMMENTS: Overall, evaluators didn't have a favorable opinion of the software. They felt the package has limited value as a supplement to classroom instruction and supervised practice. It accomplishes little beyond what a teacher would do with an overhead projector or a blackboard.

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Proportions and Per Cents

VERSION: Apple

PRODUCER: Quality Educational Designs (QED)
P.O. Box 12486
Portland, Oregon 97212

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $199.00

ABILITY LEVEL: Grades 6 through 12
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor. Also available for TRS-80 III and IV.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3
BACKUP POLICY: The user may copy the disks once.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions, post-test. In supplementary materials — suggested grade/ability level, instructional objectives, teacher's information, resource/reference information.

INSTRUCTIONAL OBJECTIVES: (INFERRED)
To introduce proportions and percents using estimation, approximation, and visual demonstrations. Specific objectives for each program on the disk are provided in the manual.

INSTRUCTIONAL PREREQUISITES: (STATED)
The program requires the ability to read at the sixth grade level. "Proportions and Per Cents" is designed to follow the first three packages in the series. Students lacking the background in fractions and/or decimals are referred to the appropriate program in the preceding packages. Students must understand the concepts of equivalent fractions, and be able to convert between fractions and decimal fractions in order to use this package.

CONTENT AND STRUCTURE: This package contains 6 disks and a 12-page User's Manual. It is the fourth in the Philo-Math (tm) Arithmetic series from QED. The other packages in the series are "Factoring Whole Numbers", "Fractions" and "Decimals".

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•	•			Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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Proportions and Per Cents, continued

Each of the 12 topics in "Proportions and Per Cents" is developed in 2 programs. The "A" programs consist of an interactive, branching tutorial, an opportunity for the student to give problems to the computer, and problem sets for the student. In these sets the student normally has control of the number of problems and level of difficulty. Most of the "B" programs are enrichment programs in game format. The final "B" program is a test on the entire series.

POTENTIAL USES: This package could be used with individual students or pairs of students who wish to work ahead, or to reinforce concepts in proportions and percents. The game programs may also be used as an enrichment activity in conjunction with a unit on proportions and percents.

ESTIMATED STUDENT TIME REQUIRED: 15 to 30 minutes per program

MAJOR STRENGTHS: The reviewers liked the format by which the topic is introduced in one program and then enriched in another program. During the explanations of the topic, the user is encouraged to explore the concept by asking the computer to do problems. The problems become increasingly complex as the student progresses. The package is very comprehensive and covers topics from a "real-world" applications point of view. Each disk has a well-done introduction for users with little computer experience. The user has total control over the topic and rate of presentation and can return to the main menu at any time.

MAJOR WEAKNESSES: The program makes very little use of graphics, color or sound. The format tends to become boring after awhile. The program asks several real-life questions, but only allows the user to answer yes or no. In some places, the instructions were difficult to understand.

OTHER COMMENTS: Generally, the reviewers were more impressed with the exploratory games than they were with the tutorials.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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QuizWhiz

VERSION: Apple

PRODUCER: Harper & Row
Electronic and Technical Publishing
10 East 53rd Street
New York, NY 10022

EVALUATION COMPLETED: October, 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $29.95

ABILITY LEVEL: Any level
SUBJECT: Any subject
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor, printer optional.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUE: Authoring, drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — instructional objectives, program operating instructions, post-test, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To be able to memorize names, dates and events.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students will need to have minimal keyboard skills.

CONTENT AND STRUCTURE: This package contains one diskette and a 43-page User's Guide. The program has two main options: ListWhiz and QuizWhiz. ListWhiz allows the teacher to enter up to 30 answers and clues, or questions, to create personalized lists or quizzes which can be saved on the program disk or separate file disks. QuizWhiz is the testing option which allows the user to study, practice, test one's self or test others using the lists provided with the program or ones created by the teacher. Scores are displayed on the screen and saved on the disk as part of the Record option. The program requires no programming experience and has menus, screen prompts and instructions for every function. There is also a brief on-screen tutorial at the beginning of the program which shows basic procedures to use for studying, testing, and creating lists.

POTENTIAL USES: This package could be used for individual review of any knowledge which fits into a clue/answer format. A student may study or be tested on a specific list.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
				•	Content is accurate.
				•	Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - NA, Instructional Characteristics - 3, Technical Characteristics - 4.

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QuizWhiz, continued

ESTIMATED STUDENT TIME REQUIRED: The time required depends on specific objectives and the length of the list.

MAJOR STRENGTHS: The package may be used in many different subject areas. The disk is a way to drill students on facts. Menu and built-in tutorial and instructions make the program easy for students and teachers to use. Data disks may be used to store teacher lists.

MAJOR WEAKNESSES: The built-in lists aren't very useful because of the wide range of ability levels required, but do serve well as examples of variety. It is very easy to accidently delete a list. A "hidden" delete function would have been helpful.

OTHER COMMENTS: Answers are limited to 28 characters. Clues may use two lines, approximately 56 characters. Teachers should be cautioned to use write protect tabs on the original program disk to avoid "accidental" deletion of lists by students.

Relevant Reading Through Science I, II, III and IV

VERSION: Apple

PRODUCER: Aquarius People Materials, Inc.
P.O. Box 128
Indian Rocks Beach, FL 33535

EVALUATION COMPLETED: July 1985 by the staff and constituents of Jefferson County Schools, Lakewood, Colorado and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $29.95 (each level). The complete 4-disk series is $115.00.

ABILITY LEVEL: Frye reading levels 1 through 8
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk or tape cassette
REQUIRED HARDWARE: 48K Apple II series, single disk drive, monitor. Also available for TRS-80 I, III and IV.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Backup disks are available for $10.00 per disk.
INSTRUCTIONAL PURPOSE: Remediation
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial
OTHER FEATURES: Reporting function

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To recall facts from a given passage; to identify the subject of a given passage; to locate the main idea of a given passage; to draw a logical conclusion from the information presented in a passage; to choose the correct meaning of a vocabulary word as used in the context of a passage; to show mastery of an isolated word attack skill; to provide practice in using context clues; to provide basic information in the content area of science; and to improve performance in the designated content area by providing for a positive transfer of knowledge.

INSTRUCTIONAL PREREQUISITES: The reading level of each passage is determined using the Frye Readability Scale. The student should be reading at the level of the package being used.

CONTENT AND STRUCTURE: Each package includes one disk, and a 39-page User's Manual. The entire series is made up of four diskettes. Disk I is for reading levels 1 and 2; Disk II is for reading levels 3 and 4; Disk III is for reading levels 5 and 6; and Disk IV is for reading levels 7 and 8.

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EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
		•			User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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Relevant Reading through Science, continued

RELEVANT READING is a reading program based on the premise that students who show significant weakness in reading are also lacking basic information in the content areas. This program is an attempt to sharpen essential reading skills by using science content information. Each disk consists of ten passages covering various science topics. Each selection is followed by ten comprehension questions which pertain to the material contained in the article. The first five questions deal with the simple recalling of facts presented. The last five questions, which always appear in category order, test the student's ability to go beyond the facts: passage content (subject), main idea, conclusion, vocabulary in context, and word attack skill. Finally, after each passage has been read and the questions answered, the reader is asked to perform either a maze (for less able students) or cloze task on the article. A management feature records and reports the students' results.

POTENTIAL USES: This program could be used with individual students in a reading class to provide practice reading passages and answering questions about what they have read. The questions require students to recall facts, main ideas, conclusions, vocabulary words, context clues, and word attack skills. The package is not intended for use in a science class. If the management system is not used, the program can be loaded into multiple machines.

ESTIMATED STUDENT TIME REQUIRED: Ten to fifteen minutes per passage for each of the ten passages in each reading level.

MAJOR STRENGTHS: Students' scores are shown upon completion of each exercise, and there is a teacher management system for monitoring students' scores and individual reading strengths and weaknesses for all selections completed. The documentation includes clearly defined objectives relating to reading and the science content covered in the passages. The hint feature allows students to review either the entire passage, or the specific portion relating to the question being asked.

MAJOR WEAKNESSES: The text passages are presented in all capital letters.

OTHER COMMENTS: This program could be improved by having a more interesting question and answer format and by adding graphics, sound, and more stimulating student feedback. It would be helpful if the support materials included black-line masters of the passages on the disks.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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The criteria used for this evaluation have been customized to accommodate SCIENCE courseware.

Science Trivia Challenge

VERSION: Apple

PRODUCER: Spectrum Software
75 Todd Pond Road
Lincoln, MA 01773

EVALUATION COMPLETED: July 1985 by the staff and constituents of Jefferson County Public Schools, Lakewood, Colorado.

COST: $16.00

ABILITY LEVEL: Grades 2 through 8
SUBJECT: Sciences
TOPIC: General Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II+, IIe, or IIc, single disk drive, monitor.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To develop a knowledge of science facts.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Success with the game depends upon how well the student can answer the science questions.

CONTENT AND STRUCTURE: This package contains one diskette with 200 multiple-choice questions arranged in eight categories. The questions have been selected from science units most often studied in schools. The categories of questions are: rocks, higher animals, lower animals, energy, plants, space, human body, and chemistry. The object of the game is to correctly answer one question in each category. It can be played individually or in pairs of students.

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EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content represents current knowledge of subject.
		•			Science issues presented objectively.
	•				Content has educational value.
				•	Science processes well integrated into package.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				The package makes good use of computer time.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.

SA	A	D	SD	NA	
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.
				•	Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
				•	User support materials are comprehensive.
				•	User support materials are effective.
	•				Package components are durable.
		•			Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that the package was reasonably priced compared with its instructional value.

Summary: Scale from 5 (High) to 1 (Low).
Content - 2, Instructional Characteristics - 2, Technical Characteristics - 2.

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Science Trivia Challenge, continued *The criteria used for this evaluation have been customized to accommodate* SCIENCE *courseware.*

POTENTIAL USES: Providing all of the science areas have been covered in class, it could be used as a supplement to the classroom science unit. Its value lies mostly in review. The package is designed for one or two individuals.

ESTIMATED STUDENT TIME REQUIRED: One class period

MAJOR STRENGTHS: The package contains reasonable variation in question difficulty. It has elements of chance (the wheel spin) which students like. The variety of questions would lend itself well to an overview of larger amounts of material.

MAJOR WEAKNESSES: There is no documentation or suggested uses, and no target audience is indicated. Some answers are found too easily by virtue of elimination. This reduces the validity and reliability. In many cases it is not testing for recognition of specific information.

OTHER COMMENTS: The content is not good enough to base course objectives around it.

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300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Scrambled Eggs

VERSION: Commodore

PRODUCER: Learning Technologies, Inc.
4255 LBJ Freeway, Suite 131
Dallas, TX 75244

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $24.95

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Problem solving
TOPIC: Logic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: Commodore 64 with one disk drive and monitor (color recommended)
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Problem solving, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop problem solving strategies by: analyzing clues, making inferences, drawing logical conclusions, identifying patterns, and experimenting with solutions.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains one disk and a 4-page User's Guide. "Scrambled Eggs" is a variation of the board game "Master Mind". The student is presented with a hen who has just laid four eggs, each with a chick inside. The chicks are randomly assigned a number 0 through 9, with no two chicks having the same number. Before the chicks can hatch, the student must discover which numbered chick is in each egg. To solve the puzzle, the student must try various combinations of four numbers and then revise the guess from clues provided by the hen.

POTENTIAL USES: This package could be used for enrichment of problem solving skills by individual students or small groups of students at the upper elementary level.

ESTIMATED STUDENT TIME REQUIRED: From 5 to 20 minutes

MAJOR STRENGTHS: The graphics, color and sound are excellent. If the user cannot solve the puzzle, he/she has the option to see the solution and then select a new problem.

MAJOR WEAKNESSES: The graphics would appeal to grades 3 through 5 but the problem solving concept would be frustrating for many students at that level. After four tries, the record of previous tries scrolls off of the screen. This makes it very difficult to analyze your responses to find a solution.

OTHER COMMENTS: Having the option to see the answers by pushing F1 is good, but another helpful intermediate option would be to show only the numbers in the eggs that the student has correctly guessed.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 3, Technical Characteristics - 3.

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The criteria used for this evaluation have been customized to accommodate SCIENCE *courseware.*

Secrets of Science Island

VERSION: Apple

PRODUCER: Grolier Electronic Publishing
95 Madison Avenue
New York, NY 10016

EVALUATION COMPLETED: July 1985 by the staff and constituents of Jefferson County Schools, Lakewood, Colorado, and Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grade 3 through Postsecondary
SUBJECT: Sciences
TOPIC: General Science
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II series, single disk drive, monitor (color recommended)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Game, problem solving

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop a knowledge of science facts, to stimulate interest in science, to refute common place myths, and to develop research skills.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student must be able to read the material in the book, Science Facts You Won't Believe.

CONTENT AND STRUCTURE: This package contains one disk, a 24-page resource book, and a 100-page book entitled Science Facts You Won't Believe. THE SECRETS OF SCIENCE ISLAND is an adventure game in which the user has a chance to travel about a magic island seeking "memstones" to build a shelter for protection from hurricanes. If the user complete the adventure in time, he/she will be safe when the

continued on back →→

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content represents current knowledge of subject.
		•			Science issues presented objectively.
	•				Content has educational value.
		•			Science processes well integrated into package.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•	•			Package achieves defined purpose.
	•			•	Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
		•			The package makes good use of computer time.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.

SA	A	D	SD	NA	
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.
•					Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Package components are durable.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

See OTHER COMMENTS section for evaluators recommendations.

Summary: Scale from 5 (High) to 1 (Low).
Content - 2, Instructional Characteristics - 2, Technical Characteristics - 3.

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The Secrets of Science Island, continued

hurricane comes, ready to go on to further adventures on the island. If not, the partly-built shelter is blown away; then the user must try again. Three adventures take place on three different parts of the island, and there are three shelters to be built. Each involves answering questions by looking in the book Science Facts You Won't Believe.

POTENTIAL USES: This package could be used by individual students or small groups of students as an extra credit activity. It is not intended to be the core of the science curriculum. Rather, it is to be used as a supplementary extension activity. It would be useful with gifted students at the upper elementary level.

ESTIMATED STUDENT TIME REQUIRED: Two hours to complete all three adventures, but can be played indefinitely.

MAJOR STRENGTHS: There is a useful save feature allowing students to stop and continue a game at a later time.

MAJOR WEAKNESSES: There are no objectives other than looking up science facts in a book. The content is very general, making it difficult to integrate into classroom practices. It is better used as a home education package. Running the "memcar" becomes tedious after a short time. The package is recommended for grades 3 through postsecondary. Elementary students would have difficulty with the vocabulary of the reference book. Junior high school and above would be more appropriate. Generally, this is not an effective use of the computer!

OTHER COMMENTS: The evaluators indicated that they would not use or recommend use of this package in conjunction with regular science instruction. The package is recommended with little or no change as an enrichment activity to develop research skills.

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Shark Attack! – Math Series

VERSION: Apple

PRODUCER: Midwest Publications
P.O. Box 448
Pacific Grove, CA 93950

EVALUATION COMPLETED: December 1984 by the staff and constituents of Oakland ISD, Pontiac, Michigan.

COST: $39.95 for each of six packages

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Mathematics
TOPIC: Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II Plus or IIe, single disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — sample program output, program operating instructions, student's instructions.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide drill and practice with arithmetic computation in a game format.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Students need prior exposure to the concepts covered in the package.

CONTENT AND STRUCTURE: This series is comprised of six individual packages covering the topics: Addition-1 (addition of 0-100), Subtraction-1 (subtraction of 0-100), Multiplication-1 (multiplication of 0-10), Division-1 (division of 0-10), Fractions-1 (addition, subtraction, multiplication and division of halves, fourths, fifths, tenths, thirds, sixths, eighths, and sixteenths), and Decimals-1 (addition, subtraction, multiplication and division of .00 through .99).

Each package consists of one diskette and an information sheet. In Shark Attack!, students must swim to the safety of the shark cage to escape the continuous pursuit of the Great White Shark. The path to the shark cage is blocked by jellyfish and schools of dangerous barracuda. To move along the path students must answer questions correctly.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes per day

POTENTIAL USES: This package can be used by individual students to practice basic arithmetic skills. It would require teacher instruction prior to its use.

MAJOR STRENGTHS: The software could be motivating and challenge the user. Questions must be answered correctly while planning to reach the shark cage without being attacked. The entire series provides drill and practice for a wide range of skills.

MAJOR WEAKNESSES: There is no facility for selecting different levels of difficulty nor does the program provide branching to different levels. There appears to be no way to exit from the drill without completing it.

OTHER COMMENTS: "This kind of drill and practice is dull and unimaginative."

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
			•		Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
				•	User support materials are comprehensive.
				•	User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would not use or recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 2, Technical Characateristics - 3.

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Solar Reading: Flight 1 – Central Thought

VERSION: Apple

PRODUCER: Learning Multi-Systems
340 Coyier Lane
Madison, WI 53713
800/362-7323

EVALUATION COMPLETED: October 1985 by the staff and constituents of Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $60.00

ABILITY LEVEL: Grades 2 through 4
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, II+, or IIe, one disk drive, monitor. Also available for Atari 800 or Atari XL series, one disk drive.
REQUIRED SOFTWARE: Apple: Applesoft, DOS 3.3. Atari: Atari BASIC.
BACKUP POLICY: Backup available at $10.00 per set
PREVIEW POLICY: 30-day preview upon request
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: In program – program operating instructions, student's instructions. In supplementary materials – suggested grade/ability level, instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, resource/reference information, student's instructions, student worksheets, textbook correlation, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To offer practice for students in identifying the topic of passages with and without a stated central thought.

INSTRUCTIONAL PREREQUISITES: (STATED) Students should read at approximately third grade level.

CONTENT AND STRUCTURE: This package is the first in a series of what will be 13 reading packages. Other packages are scheduled for publication during 1986. It contains two disks, one teacher guide and ten student guides. Disk One contains the MERCURY program which requires the student to identify the main topics of ten passages with and without topic sentences. Disk Two contains the VENUS and BLAST OFF programs. In the VENUS program, students are required to identify the relevant and irrelevant information. BLAST OFF is a Tic-Tac-Toe game which allows students to interact with each other and to use the skills they have been practicing in a fun way. Students use the activities in the GUIDEBOOK throughout. Later, they score their answers on the computer.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package only if certain changes were made. (See OTHER COMMETNS section.)

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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Solar Reading, continued

POTENTIAL USES: This package should be used with students reading at the third grade level who are just learning basic comprehension skills, or older students who need remedial work. This package would work well with individuals, as well as small groups.

ESTIMATED STUDENT TIME REQUIRED: Dependent upon reading ability. Approximately, 20 minutes for each task.

MAJOR STRENGTHS: The directions are easy to follow and the students can use the package independently. Feedback is provided which corrects errors and reinforces correct responses. It helps students identify irrelevant information. The game, BLAST OFF, is motivational.

MAJOR WEAKNESSES: The package is much like a workbook. The reviewers question if computer use is necessary.

OTHER COMMENTS: This package does not make the best use of the computer compared to some others, however, in cases where motivation and immediate feedback are needed, the package would be useful.

Sorting Techniques, I, II

VERSION: Apple

PRODUCER: Microcomputer Workshops
Courseware
225 Westchester Avenue
Port Chester, NY 10573
914/937-5440

EVALUATION COMPLETED: June 1985 by the staff and constituents of the Institute for Educational Research, Glenn Ellyn, Illinois.

COST: $34.95 each

ABILITY LEVEL: Grade 9 through Postsecondary
SUBJECT: Computer Science
TOPIC: Programming
MEDIUM OF TRANSFER: 5-1/4 inch disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Backup disks included
PREVIEW POLICY: 30-day preview with school purchase order
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, and enrichment
INSTRUCTIONAL TECHNIQUES: Demonstration

DOCUMENTATION AVAILABLE: In program — program operating instructions. In supplementary material — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To give a class or individual student the understanding of how different sorting techniques work by graphically displaying the sort in a step-by-step manner.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Programming ability in BASIC.

CONTENT AND STRUCTURE: Each package includes one disk and 10 pages of instructions.

SORTING TECHNIQUES I: The user is given a menu of five different sorting routines: Bubble Sort, Shell Sort, Insertion Sort, Selection Sort, and Quick Sort. The algorithm and a graphic representation of the sort is shown. Ten large block letters, picked at random, are shown on the screen. The user controls each step of the sort by pressing the space bar. The two numbers to be compared are shown in inverse and are then exchanged (or not) graphically on the screen. This continues until the sort is complete or the user exits the routine. Full documentation listing the algorithm and an explanation of each sort is given.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
				•	Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
		•			Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated that they would use or recommend use of this package only if certain changes were made.

Summary: Scale 5 (High) to 1 (Low)
Content - 3, Instructional Characteristics - 3, Technical Characteristics - 2.

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Sorting Techniques, continued

SORTING TECHNIQUES II: This program is similar to Sorting Techniques I. It demonstrates three sorting techniques and one searching technique (used in many sorting routines): Heap Sort, Link Sort, Shaker Sort, and Binary Search. Explanation of each routine is graphically demonstrated on the screen. The teacher or student controls each step of the algorithm being shown.

ESTIMATED STUDENT TIME REQUIRED: Each sort would take about 5-10 minutes.

POTENTIAL USES: It can be used in an advanced programming class as a visual aid, or independently by students.

MAJOR STRENGTHS: The package demonstrates a wide variety of different sorts.

MAJOR WEAKNESSES: The graphics could be improved in terms of clarity and the manner in which the large numbers are displayed. The package does not relate the program code shown in each type of sort with what is happening in the demonstration.

OTHER COMMENTS: This is not a self-instructional program. Teacher explanation would be required. One reviewer commented that there are other packages on the market which do a better job of the same thing.

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States & Traits

VERSION: Apple

PRODUCER: DesignWare
185 Berry Street
San Francisco, CA 94107
(800) 572-7767

EVALUATION COMPLETED: October 1985 by the staff and constituents of North Clackamas School District, Milwaukie, Oregon and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $44.95

ABILITY LEVEL: Grades 3 through 9
SUBJECT: Social Studies
TOPIC: Geography
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor, joysticks (optional). Also available for 64K IBM-PC (requires color monitor adapter card) and Commodore 64.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To make learning geography fun; and to learn state names, bordering states and rivers, major mountain ranges, rivers and lakes, historical facts, current trivia and capitals.

CONTENT AND STRUCTURE: This package contains one diskette and a 27-page user's guide. The program uses databases to teach geographical facts in three game settings. In Place State on Map, students learn where states are by moving a state outline to the correct position on a regional or United States map. In Match States & Traits, students match clues (like state names, current and historical events) to the locations on the U.S. map. In Make Your Own Trait students study history and geography facts by creating their own clues. Teachers or students may add their own databases. Information could include the dates states entered the union, the location of famous Revolutionary Battle sites, the names of state governors and so forth. All three games may be played with a map showing state borders or an outline with just rivers and mountains. A score is given at the end of each game.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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States and Traits, continued

POTENTIAL USES: The package provides excellent material to supplement a social studies curriculum. Students can work independently or in small groups for enrichment, reinforcement or to develop visual and spacial relationships.

ESTIMATED STUDENT TIME REQUIRED: Students may work from 10 to 30 minutes per game as a review or to add new knowledge.

MAJOR STRENGTHS: The program is very friendly and clear in its instructions to students. It provides excellent map graphics to help students visually locate states. Students will easily learn relationships. There are enough difficult parts to keep advanced students interested since there is always a new challenge.

MAJOR WEAKNESSES: When the program gives the correct answer, it abbreviates the state name. The manual does have a list of abbreviations. Spelling of state names is not reinforced; however, the new standard abbreviations are.

OTHER COMMENTS: This game would be more fun with a joystick. Use of a color monitor enhances the graphics.

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Stickybear Spellgrabber

VERSION: Apple

PRODUCER: Weekly Reader Family Software,
A Division of Xerox
Educational Publishing
245 Long Hill Road
Middletown, CT 06457
203/347-7251

EVALUATION COMPLETED: September 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: Apple: $39.95, Commodore 64: $29.95

ABILITY LEVEL: Grades 1 through 4
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor (color recommended but not essential). Also available for Commodore 64.
REQUIRED SOFTWARE: Apple, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach more than 4,000 high frequency words taken from the Weekly Reader word list and the Ginn Lexicon Dictionary; to link the meanings of words with the mechanics of spelling; to focus on basic word structures; to familiarize the user with the computer keyboard; and to motivate beginning spellers to improve their spelling skills.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Primary reading and spelling skills.

CONTENT AND STRUCTURE: This package contains one diskette, a 32-page User's Guide, a Stickybear poster, and Stickybear stickers. Three activities are included on the disk. "Picture Spell" develops a basic spelling list by using over 200 word/picture combinations. "Word Spell" is a word scramble game that encourages the user to recreate words shown on the screen. "Bear Dunk" is a hangman-type game in which the user must save Stickybear before it is too late. The program also allows you to add your own words to the list to expand the over 4,000 provided in the master list.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
			•		Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 5.

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(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Stickybear Spellgrabber, continued

POTENTIAL USES: This program would be most appropriately used as enrichment for individual students.

ESTIMATED STUDENT TIME REQUIRED: Time would vary depending upon the background of the user; generally 15 to 20 minutes per game.

MAJOR STRENGTHS: This package is a motivating way to encourage students to practice spelling. The graphics and sound are very appealing. "Bear Dunk" is a clever variation of "hangman". Students will definitely be motivated to save the bear, especially after they have seen him be dunked at least once. The option to make your own word list is helpful. The words used in the master list are words used often in everyday spoken and written language. The complete master word list is printed in the documentation. The directions are concise and easy to follow.

MAJOR WEAKNESSES: Some of the picture graphics in "Picture Spell" are hard to distinguish.

OTHER COMMENTS: Although the package provides for student input using the keyboard, joystick or mouse, the keyboard input actually becomes a distractor for many students. Students attend more to the keyboard input than to the task at hand. It would be helpful to have direction key prompts displayed at the bottom of the screen. When a joystick or mouse is used, students can easily operate the program.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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Story Tree

VERSION: Apple

PRODUCER: Scholastic, Inc.
2931 East McCarty Street
P.O. Box 7502
Jefferson City, MO 65102

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $59.95. Lab packs containing five sets of disks are available for $99.95.

ABILITY LEVEL: Grades 4 through 12
SUBJECT: Language Arts
TOPIC: Writing
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive, monitor, printer (optional). Also available for 128K IBM-PC and PCjr, and Commodore 64.
BACK UP POLICY: Backup disks are provided.
PREVIEW POLICY: Full refund if returned within 30 days
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Word processor
DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide a tool which will enable the student to compose interactive stories.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should be familiar with the computer keyboard. The student must become familiar with the operation of the word processor capabilities of the program before they will be able to begin writing a story.

CONTENT AND STRUCTURE: This package contains a program disk, a sample story disk, backup disks of each, and a 75-page manual. The manual contains a quick start guide, reference guide, tutorial, teacher's guide, curriculum ideas, and instructions for creating Story Tree shells. Story Tree is a program for writing and reading "interactive" stories which allows the reader to make choices about the way the story will unfold. Stories branch from one beginning to many different endings and may also include chance events along the way.

POTENTIAL USES: This package could be used as an enrichment activity for individual students or small groups of students at the upper elementary or junior high school level. It could also be used by an entire class where the class decides the theme of the story and designs a flowchart of the branching pattern in a class discussion. Each student, or pair of students, is assigned to

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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Story Tree, continued

compose one of the various sections of the story. The package also has relevance in other subject areas such as social studies, science, health, etc.

ESTIMATED STUDENT TIME REQUIRED: Varies depending upon the length and complexity of the story the user chooses to read or write.

MAJOR STRENGTHS: The use of the package encourages the student to plan ahead to create an organized story. It involves a lot of problem solving on the student's part. Use of the package motivates students to write. The package is flexible enough to allow creativity. The manual is clearly written, very comprehensive, and contains many suggestions for classroom use.

MAJOR WEAKNESSES: The teacher would need to invest a considerable amount of time learning the package and the process of writing interactive stories before attempting to use the package with students. This is especially true if the teacher is not familiar with word processing.

OTHER COMMENTS: The package is a tool for writing interactive stories. It does not teach the student how to write interactive stories. It is the responsibility of the teacher to provide instruction on this writing process and technique.

Subject-Verb Agreement

VERSION: Apple

PRODUCER: Microcomputer Workshops
Courseware
225 Westchester Avenue
Port Chester, NY 10573
914/937-5440

EVALUATION COMPLETED: October 1985 by the staff and constituents of Oregon Total Information Systems (OTIS), Eugene, Oregon and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $49.95

ABILITY LEVEL: Grades 7 through 9
SUBJECT: Language Arts
TOPIC: Grammar
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Backup disk included
PREVIEW POLICY: 30-day preview period with school purchase order
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — pre-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To help students master problems concerning subject-verb agreement.

INSTRUCTIONAL PREREQUISITES: (STATED) The program assumes students have a knowledge of basic grammar.

CONTENT AND STRUCTURE: This package contains one disk, a backup disk, and a 12-page user's guide. The program covers 18 agreement rules including compound subjects, indefinite pronouns and collective nouns. There are 5 parts for student use: Singular and Plural Verb Forms, Study a Rule, Do an Exercise, Do a Diagnosis Test, and Review Rules and Cautions. The program can compose literally billions of practice sentences. The sentences are sometimes bizarre but with the exception of the agreement between subject and verb, the sentences are always grammatically correct. The teacher can personalize the program for individual classes and students by adding students' names and well-known places to the glossary list.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 3.

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Subject-Verb Agreement, continued

POTENTIAL USES: This package could be used with individual students or small groups of students.

ESTIMATED STUDENT TIME REQUIRED: Approximately 15 to 20 minutes per session for several sessions.

MAJOR STRENGTHS: The goals of the package are clearly stated. The on-screen instructions are very clear which allows the student to use the package with very little teacher direction. The student cannot continue until the correct answer is found. Incorrect answers lead to a review of the rules. The diagnosis test is useful to pinpoint the areas where the student is having problems. The word editor allows the teacher to enter special vocabulary to stimulate student interest.

MAJOR WEAKNESSES: The rules which are displayed on the upper part of the screen are cluttered and difficult to read. The results of the diagnosis test would be more useful if they were generalized rather than simply stating the items missed.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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U.S. History Databases for PFS:File

VERSION: Apple

PRODUCER: Scholastic, Inc.
P.O. Box 7502
2931 East McCarty Street
Jefferson City, MO 65102

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland Oregon.

COST: $99.95

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Social Studies
TOPIC: History
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple IIe or IIc, two disk drives, monitor, printer. (Some of the activities can be used with no printer and only one disk drive.)
REQUIRED SOFTWARE: PFS:File and PFS:Report for Apple IIe or IIc (PFS:Graph is optional)
BACK UP POLICY: Backup included with package
PREVIEW POLICY: Full refund if returned within 30-days
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Information retrieval, problem solving

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities. More detailed objectives are given for each activity.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach students how to use data files and how to build their own; and to provide an opportunity to explore the topics of: the expanding American frontier, inventors and technology, twentieth-century America, American presidents, local history, and other miscellaneous topics in American history.

INSTRUCTIONAL PREREQUISITES: (STATED) Use of the package requires a prior understanding of databases and particularly the PFS:File and PFS:Report systems. The package includes instructions for the use of both of these systems.

CONTENT AND STRUCTURE: This package contains three copies of each of two disks, and an extensive 312-page manual. The package is made up of a teacher's guide, three units involving using existing databases, three units involving the creation of a database, a quick guide for use of the PFS series, mini-references for PFS:File and Report, and a glossary/appendix. The units are as follows.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•	•			Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•	•			Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 3, Instructional Characteristics - 4, Technical Characteristics - 3.

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U.S. History Databases, continued

THE EXPANDING AMERICAN FRONTIER contains 8 exploratory activities involving the use of a prepared database containing important facts about people and events that shaped the expansion of the American Frontier. Major topics include the westward movement, people of the American Frontier, statehood and the exploration of space.

INVENTORS AND TECHNOLOGY contains 8 exploratory activities involving the use of a prepared database containing information about important inventors and inventions.

TWENTIETH-CENTURY AMERICA contains 10 exploratory activities involving the use of a prepared database containing statistical data on a wide range of topics, including people, the government, and the economy in twentieth-century America.

AMERICAN PRESIDENTS contains 8 activities where students create and explore a database of information on the the presidents of the United States.

LOCAL HISTORY contains 8 activities where students create and explore a database containing information about their local community.

FUN WITH AMERICAN HISTORY contains 8 activities where the students create and explore a database containing fun facts and trivia about twentieth-century America.

POTENTIAL USE: This program could be used with small groups of students or as a classroom demonstration. It is best used to develop research process skills rather than the content matter contained in the files. It could also be used as additional reference materials.

ESTIMATED STUDENT TIME REQUIRED: Each activity can be completed in about 30 to 45 minutes. Extension activities would involve more time.

MAJOR STRENGTHS: The purpose of the package is to teach the student how to use the data retrieval capabilities of the computer to analyze and test hypotheses. The package does a good job of teaching these highly transferrable skills. The manual contains very clear instructions both for the use of the computer and the activities in general. The documentation includes ready-to-use lesson plans and reproducible student worksheets. A detailed scope and sequence makes the package easy to integrate into long range lesson planning.

MAJOR WEAKNESSES: Some of the searches using PFS:File take a very long time to complete. The package places too much emphasis on the mechanics of using the software and not enough emphasis on the interpretation of the result. The exploratory nature of this package requires close teacher monitoring, especially if used with lower ability students.

OTHER COMMENTS: It is very easy for the student to contaminate the data on the disk inadvertently. It is important that the teacher copy the data files from the master disk to the student disks prior to use. Students will need a list of abbreviations for each state in order to perform searches.

The Voyage of the Mimi: Ecosystems with Island Survivors

VERSION: Apple

PRODUCER: Holt, Rinehart and Winston
Attn.: Order Fulfillment Dept.
CBS, Inc.
383 Madison Avenue
New York, NY 10017

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $122.25. $60.00 without the 25 student workbooks.

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Science
TOPIC: Biology, Ecology
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive, color monitor.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Backup provided
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, textbook correlation, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop an understanding of ecosystems, and the processes and principles around which life on earth is organized.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should complete the workbook prior to using the software.

CONTENT AND STRUCTURE: This package contains a master disk, a backup disk, 25 student workbooks, and a 64-page teachers edition. It is the third in The Voyage of the Mimi series of learning modules. This package can be used in conjunction with the series of 13 half-hour television episodes and with the video cassette series entitled "The Voyage Of the Mimi". The other packages in the series are: Introduction to Computing, Maps and Navigation, and Whales and Their Environment with The Bank Street Laboratory.

The Student Guide introduces ecosystems and includes guidelines for setting up a mini-ecosystem in the classroom. This sets the foundation for Island Survivor, a two part

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•	•			Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 4, Technical Characteristics - 5.

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Ecosystems, continued

software program in which the students apply their understanding of ecosystems. In the first part of Island Survivors, students select eight species — four species that live on the land and four that live in a pond — to inhabit an island ecosystem. The selections are made from animated food webs in which the producer/consumer relationships among the plant and animal species can be seen. The four selections from each food web must include appropriate food sources for the specific consumers selected. Once the selections from the land and pond food webs have been made, students have the option of changing the relative population levels of the species that will inhabit the island. This part of the program includes a graphing feature that shows the changing populations of the selected species over time, based on the interactions among the species and their relative populations at the start.

The second part of Island Survivors is an adventure type game. The interactions among parts of the ecosystem are important elements of the game. Underlying the game is a mathematical model with which the computer can keep track of and visually represent the dynamic nature of an island ecosystem.

POTENTIAL USES: The program could be used by one student or by small groups of students to study ecosystems and participate in a simulation on ecosystems. It could be used in a science class or a social studies class with a unit on man's impact on the environment. It would be a nice enrichment activity following a unit on ecosystems.

ESTIMATED STUDENT TIME REQUIRED: Approximately 15 to 45 minutes. Since it is in a game format, it could be played indefinitely.

MAJOR STRENGTHS: The package presents a very comprehensive coverage of the topic in a creative and entertaining manner. The graphics and color are very appealing. Students enjoy making the selections and "survival" decisions in the simulation. The total integration of print materials, video, and software into one instructional unit is excellent.

MAJOR WEAKNESSES: When using the game, the "hunting" and "fishing" directions are difficult to understand and use. There could be more explanation to the user concerning the graphs. They seemed to appear on the screen rapidly after the "hunting" and "fishing" sequences and the transition was not smooth. This causes confusion. One reviewer commented that the package is more appropriate for use at the junior high school level than with upper elementary students.

OTHER COMMENTS: It is important that the workbook be used prior to the software to build an adequate understanding of ecosystems.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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The Voyage of the Mimi: Whales and Their Environment with the Bank Street Laboratory

VERSION: Apple

PRODUCER: Holt, Rinehart and Winston
Attn.: Order Fulfillment Dept.
CBS, Inc.
383 Madison Avenue
New York, NY 10017

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $374.25. $312.00 without 25 student workbooks. (NOTE: Price subject to change.)

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Science
TOPIC: Biology, Ecology
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 64K Apple II, one disk drive, color monitor.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACKUP POLICY: Make your own backup disks
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Laboratory interfacing, problem solving

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, textbook correlation, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide a tool for measuring light, temperature, and sound which will enable the student to perform scientific explorations.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: This package contains a boot disk, a lab disk, 25 student workbooks, a 70-page Teacher's Edition, a User's Manual, an electronic circuit on a board that plugs into an Apple computer, two temperature sensors, a light sensor, a light source, a microphone, a speaker, three connectors, and two slides for light experiments. It is the fourth in "The Voyage of the Mimi" series of learning modules. This package is designed to be used in conjunction with the 13 half-hour episode television series and video cassette series entitled "The Voyage of the Mimi". The other packages in the series are: Introduction to Computing, Maps and Navigation, and Ecosystems.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 5, Instructional Characteristics - 5, Technical Characteristics - 5.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

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Whales and Their Environment, continued

The Student Guide introduces the student to whales and their environment which sets the stage for a study of light, temperature, and sound. The Guide provides instructions for conducting 15 physical science experiments.

The software enables the computer to be used to measure temperature, light, and sound. The temperature modules provide the following functions: calibration of the temperature probes, absolute measurement of temperature in either Fahrenheit or Celsius scales, comparing the temperature between two probes, and plot a graph of temperature against time (time up to 1000 hours).

The light module provides the following functions: calibration of the light sensors, absolute measurement of light intensity, compare up to five successive measurements of light intensity, and plot a graph of light intensity against time. A computer-controlled light source is also available.

The sound module provides the following functions: calibration of the microphone, absolute measurement of loudness and frequency, absolute measurement of sound level, comparison of up to five successive measurements of sound level, plotting a graph of sound level against time, absolute measurement of sound frequency, comparison of up to five successive measurements of sound frequency, plotting a graph of the sound wave, plotting a graph of pitch against time, and then playing back the sound pattern.

POTENTIAL USES: The program could be used by small groups in a science lab setting, or in a large group demonstration. It would also be good for independent study such as a research project or a science project. Music teachers can use the sound module to enhance music theory.

ESTIMATED STUDENT TIME REQUIRED: Each lab would require 35 to 45 minutes.

MAJOR STRENGTHS: The package encourages a strong involvement of the student in experimental science. The measurements can be displayed in a variety of ways for student analysis. The graphics are simple, clear and pertain directly to the objective of the activity. Use of the package motivates the student to do the experiments. The materials are simple but very flexible. Further experiments can easily be generated. The sensory devices are durable and well constructed for student use; it is extremely easy to hook up sensors, change sensors, etc. The package makes use of icons to show which sensory device is connected.

MAJOR WEAKNESSES: The on-screen instructions sometimes lack specific directions explaining when to connect which sensor devices. The relationship between "Whales and Their Environment" and the activities in the "Bank Street Laboratory" is very vague.

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(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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BEST COP

What's My Logic?

VERSION: Apple

PRODUCER: Midwest Publications
P.O. Box 448
Pacific Grove, CA 93950

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland Oregon.

COST: $39.95

ABILITY LEVEL: Grade 3 through Postsecondary
SUBJECT: Problem solving
TOPIC: Logic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II series, one disk drive, monitor (color or black and white depending upon the version purchased)
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Problem solving, game

DOCUMENTATION AVAILABLE: In supplementary materials — suggested grade/ability level, instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To help sharpen analytical thinking skills for better academic performance and problem solving; to discover some basic rules of logic, i.e., negation, conjunction, inclusive or, and exclusive or.

INSTRUCTIONAL PREREQUISITES: (INFERRED) None stated.

CONTENT AND STRUCTURE: This package contains one disk and a one-page set of instructions. In What's My Logic, the user is presented with an array of brightly colored shapes and objects. There exists a path through the array which is determined by some logical rule unknown to the user. The user must deduce this rule by trying various paths. The disk contains twenty different problem arrays.

POTENTIAL USES: This package would be best used as enrichment for individual students or small groups of students in grades 4 through 9. It is useful for developing analytical thinking skills, problem solving skills and knowledge of basic rules of logic.

ESTIMATED STUDENT TIME REQUIRED: From 5 to 20 minutes per game depending upon the level of the game and the problem solving skills of the user.

MAJOR STRENGTHS: The program has a variety of difficulty levels which are arranged in order from 1 to 20. The instructions are brief and straightforward. The documentation includes an answer key which enables the teacher to give quick hints. The game is inherently motivational and does achieve its goal. There is a color and a black and white version which makes the program more versatile.

MAJOR WEAKNESSES: It would be very helpful, especially for younger students, if a clue was provided after some number of tries. Because no clue is provided some students find it very frustrating. After the user solves the problem the first time the package looses some of its appeal.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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WordMath

VERSION: Apple

PRODUCER: Milliken Publishing Co.
1110 Research Blvd.
P.O. Box 21579
St. Louis, MO 63132-0579

EVALUATION COMPLETED: October 1985 by the staff and constituents of the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: Without backups: $195.00. With backups: $290.00. Additional disks each: $45.00. Set of 12 Student Workbooks: $25.00

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Mathematics
TOPIC: Problem solving, Arithmetic
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive and monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3
BACK UP POLICY: Available separately
PREVIEW POLICY: Demonstrations available through regional representatives.
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, problem solving

DOCUMENTATION AVAILABLE: In program — instructional objectives, post-test, student's instructions. In supplementary materials — suggested grade/ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets, textbook correlation.

INSTRUCTIONAL OBJECTIVES: (STATED) To teach students how to cope with different kinds of math word problems.

INSTRUCTIONAL PREREQUISITES: (STATED) Students need the basic computational skills of the four operations with whole numbers.

CONTENT AND STRUCTURE: This package contains 4 disks, a Teacher's Guide, Student Workbook I and Student Workbook II. WordMath consists of 4 modules each containing 2 levels of difficulty; simple and complex. Problems at the simple level tend to be shorter and require less sophisticated calculations than those at the complex level. Complex problems also review previous modules. An optional 5-problem post-test can be assigned by the teacher. The 4 modules are: Basic Problems, Forward Order/Reverse Order, Extra Numbers and Hidden Numbers. A management program maintains up to 100 individual student assignments and records.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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WordMath, continued

POTENTIAL USES: This package could be used by individual students needing to learn how to work word problems. The management system makes the package ideal for individualized work in a resource center.

ESTIMATED STUDENT TIME REQUIRED: Approximately 15 sessions of 15 to 20 minutes each.

MAJOR STRENGTHS: The module objectives are clearly stated for both the teacher and the student. The package leads the student through the problem step-by-step. Displaying the strategy for solving the problem and showing how the strategy works is very helpful and makes it very clear to the students. The feedback to the student when they make an error is positive and corrective. The display screens are clear and add to student interest. The management system is helpful to the teacher for monitoring the students' progress and for assigning work in specific skill areas. The support materials are very comprehensive and easy to follow.

MAJOR WEAKNESSES: It would be helpful if the program would prompt the student to press RETURN when necessary. The package makes very little use of graphics or sound. The user can only exit at certain times in the program. The choices offered to the student are very limited.

OTHER COMMENTS: This package would work well if the teacher had a small group of 5 to 10 students. With an average size class of 25 to 35, the program would require too much time to maintain for the instructional value it produces.

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The Writing Workshop

VERSION: Apple

PRODUCER: Milliken Publishing Company
1100 Resarch Blvd.
P.O. Box 21579
St. Louis, MO 63132-0579

EVALUATION COMPLETED: October 1985 by the staff and constituents of Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $195.00

ABILITY LEVEL: Grades 2 through 10
SUBJECT: Language Arts
TOPIC: Writing
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor, printer.
BACKUP POLICY: Back up disks are provided.
PREVIEW POLICY: Demonstrations available through regional representatives.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Word processor, tutorial

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — prerequisite activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To provide a word processing tool to facilitate the writing process. To provide prewriting activities in brainstorming a topic, modified outlining, and summarizing proposed writing.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The user should be familiar with the keyboard. Success with this package depends on student's success with the word processor.

CONTENT AND STRUCTURE: This package contains a word processing disk, a blank file cabinet disk, three prewriting disks, backup disks of each and a manual, including reproducible worksheets. The Writing Workshop has two major parts: the Milliken Word Processor and the prewriting activities which involve the traditional planning tools in writing. Brainstorming allows students to explore a topic by free association; Branching permits development of an outline on a topic; and Nutshelling allows students to think about purpose, audience and other tentative ideas. The manual contains "Easy Does It" instruction, twenty reproducible writing outlines, teacher prewriting activities, and extension activities.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
•					Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would highly recommend this package.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

Northwest Regional Educational Laboratory
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The Writing Workshop, continued

POTENTIAL USES: The prewriting activities and the 22 reproducible worksheets could be used with a class, small groups or individuals to stimulate the writing process. The word processor could be used individually or by pairs.

ESTIMATED STUDENT TIME REQUIRED: Varies depending upon the keyboard skills and length of document. Each prewriting disk would use a minimum of 15 minutes and may be used repeatedly on a variety of writing topics and skills.

MAJOR STRENGTHS: The word processor is very easy to use in composing and editing work. Graphics help the user identify which part of the word processor they are using. Little instruction from the teacher is needed to get started. The manual offers student activities to stimulate writing and teacher suggestions for lessons to supplement worksheets.

MAJOR WEAKNESSES: The prewriting activities are more difficult to understand and would take a few lessons of instruction before students would be able to work independently.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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You Are What You Eat

VERSION: Apple

PRODUCER: Marshware, a Division of
Marshfilm, Inc.
P.O. Box 8082
Shawnee Mission, KS 66208

EVALUATION COMPLETED: September 1985 by the staff and constituents of Montgomery County Public Schools, Rockville, Maryland and the Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95. The entire 3 disk Nutrition Series is available for $101.00.

ABILITY LEVEL: Grades 7 through 12
SUBJECT: Health, Home Economics
TOPIC: Nutrition
MEDIUM OF TRANSFER: 5-1/4 in. disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor (color recommended), printer (optional)
REQUIRED SOFTWARE: DOS 3.3
PREVIEW POLICY: Materials may be ordered on 30-day memo billing.
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Personal inventory

DOCUMENTATION AVAILABLE: In program — program operating instructions, student's instructions. In supplementary materials — instructional objectives, program operating instructions, teacher's information, student's instructions, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED) To develop an awareness of the weaknesses and strengths of personal eating habits; and to develop an understanding of the relationship between good eating habits and good health.

INSTRUCTIONAL PREREQUISITES: (STATED) The student must compile a written list of everything eaten in a single day.

CONTENT AND STRUCTURE: This package contains one disk and a 17-page User's Guide. It is one of a series of three packages which comprise the Marshware Nutrition Series. This package allows the student to input a list of foods he/she has eaten during a day. The computer analyzes the list and indicates the strengths and weaknesses of the student's eating habits. A printout of the food list and analysis is also available.

POTENTIAL USES: This package could be used as an introductory activity to a unit on nutrition to sharpen awareness of personal eating habits. It is best used individually at the junior or senior high level.

ESTIMATED STUDENT TIME REQUIRED: 30 to 45 minutes

MAJOR STRENGTHS: The package contains a data base of 700 foods. The analysis includes calculations of total calories, sodium, cholesterol, fat and protein. A bar graph illustrates the proximity to RDA for each item. The metric system of measurement is used. The documentation includes a 3-day diary chart which can be duplicated for individual student use.

MAJOR WEAKNESSES: None stated.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
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	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated that they would use or recommend use of this package with little or no change.

Summary: Scale from 5 (High) to 1 (Low).
Content - 4, Instructional Characteristics - 4, Technical Characteristics - 4.

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SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
04	ALLIGATOR MIX	DLM	39.00	AP	E M	MA	ARITHMETIC
	APPLE‡SURFACE	CONDUIT	40.00	AP	H	MA	ALGEBRA
	COMPREHENSION POWER PROGRAM	INST/COMM	425.00	AP	E M H	LA	READING
	COMPUTER SIMULATED PHYSICS EXP	EDUTECH	85.00	AP	H	SC	PHYSICS
	DEMO-GRAPHICS	CONDUIT	85.00	AP	H	SS	MISC.
	ELEMENTARY MATHEMATICS CLASS-ROOM LEARNING SYST.: WHOLE NO.	STER SWIFT	495.00	AP	M	MA	ARITHMETIC
	ENERGY CZAR	ATARI	14.95	AT	M H	SC	ENVIRONMENT
	ENGLISH COMPUTORIALS	EDUCULTURE	625.00	AP	H	LA	WRITING
	ESSENTIAL MATH PROGRAM	RADIO SHAK	199.00	RS	M H	MA	ARITHMETIC
	EUCLID GEOMETRY TUTOR	RADIO SHAK	29.95	RS	H	MA	GEOMETRY
	EVOLUT	CONDUIT	30.00	AP	H	SC	BIOLOGY
	FUNDAMENTAL MATH I, II, III	RANDOM	699.00	RS	E M	MA	ARITHMETIC
	GRAMMAR PACKAGE I	MICRO LRN	24.95	RS	E	LA	GRAMMAR
	GRAMMAR PROBLEMS FOR PRCT.-HOM	MILLIKEN	80.00	AP	E M	LA	GRAMMAR
	HOMONYMS IN CONTEXT	RANDOM	60.00	AP	E M	LA	VOCABULARY
	INSTRUCTIONAL COMPUTING: ALG-2	PINELLAS	5.00	AP	H	MA	ALGEBRA
	MILLIKAN	MENTOR	19.95	AP	H	SC	CHEMISTRY
	MINUS MISSION	DLM	39.00	AP	E M	MA	ARITHMETIC
	MORE ALGEBRA: COMP	TYCOM	19.95	PET	H	MA	ALGEBRA
	MORE ALGEBRA: DISC	TYCOM	19.95	PET	H	MA	ALGEBRA
	MORE ALGEBRA: QUAD	TYCOM	19.95	PET	H	MA	ALGEBRA
	MORE ALGEBRA: SIMUL	TYCOM	19.95	PET	H	MA	ALGEBRA
	MORE ALGEBRA: SLOPE	TYCOM	19.95	PET	H	MA	ALGEBRA
	MY FIRST ALPHABET	ATARI	34.95	AT	P	PR	READINESS
	NEWTON	CONDUIT	35.00	AP	H	SC	PHYSICS
	NUMBER BLAST	APX	15.95	AT	E M	MA	ARITHMETIC
	NUMERIC DATA ENTRY PRACTICE	RADIO SHAK	39.95	RS	H	BE	TYPING
	SENTENCE DIAGRAMMING	AVANT GARD	24.95	AP	M H	LA	GRAMMAR
	SENTENCES	MICRO P&L	24.95	AP	M H	LA	GRAMMAR
	SPANISH HANGMAN, THE	GEO EARL	29.95	AP	M H	FL	SPANISH
	TITRATION	MENTOR	19.95	AP	H	SC	CHEMISTRY
	TOUCH TYPING	COVE VIEW	24.95	RS	M H	BE	TYPING
	WORDWATCH	INST SOFT	14.95	RS	M	LA	VOCABULARY
COUNT:	33						
05	ANTONYMS/SYNONYMS	HARTLEY	39.95	AP	E M	LA	VOCABULARY
	ARITHMETIC CLASSROOM, THE:DEC	STER SWIFT	49.95	AP	E M	MA	ARITHMETIC
	ARITHMETIC CLASSROOM, THE:FRAC	STER SWIFT	49.95	AP	E M	MA	ARITHMETIC
	BASIC ENGLISH SKILLS	BRITANNICA	373.00	AP	M H	LA	GRAMMAR
	CONSONANTS/BLENDS	HARTLEY	79.95	AP	P	LA	READING
	CREATE FILL-IN-THE-BLANKS	HARTLEY	26.95	AP	E	IT	SHELL
	CREATE SKILLS: ELEM./INT.	HARTLEY	26.95	AP	E	IT	SHELL
	CREATE SPELL-IT	HARTLEY	26.95	AP	E M	LA	SPELLING
	EASY GRADER	APX	22.95	AT	E M H	IT	STUDENT RECORDS
	KEYBOARD ORGAN	APX	22.95	AT	M H	MU	MUSIC
	LEMONADE	APX		AT	E M	SS	ECONOMICS
	LETTER RECOGNITION	HARTLEY	26.95	AP	P	PR	READINESS
	MAGIC SPELLS	TLC	45.00	AP	E M	LA	SPELLING
	MATH CONCEPTS	HARTLEY	39.95	AP	E	MA	ARITHMETIC
	MATH STRATEGY	BEHV ENGIN	45.00	AP	E M	MA	ARITHMETIC
	METRIC DRILL	HARTLEY	49.95	AP	E M	MA	MEASUREMENT

MICROSIFT INDEX: BY SETS 11/85

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	NOUNS/PRONOUNS	HARTLEY	32.95	AP	E	LA	GRAMMAR
	ROOTS/AFFIXES	HARTLEY	39.95	AP	E M	LA	GRAMMAR
	SPEED READER	DAVIDSON	70.00	AP	M H	LA	READING
	SPELLING STRATEGY	BEHV ENGIN	45.00	AP	E M	LA	SPELLING
	TEST BANK	ADV TECH	450.00	RS	E M H	IT	TESTING
	VERBS	HARTLEY	32.95	AP	E	LA	GRAMMAR
	VOCABULARY DOLCH	HARTLEY	39.95	AP	P	LA	VOCABULARY
	WORD FAMILIES	HARTLEY	29.95	AP	P	LA	READING
	WORD SEARCH	HARTLEY	26.95	AP	E	LA	VOCABULARY
COUNT:	25						
06	ATOM, THE	MICROED	14.95	AP	M	SC	PHYSICS
	CHECKERS	ODESTA	49.95	AP	E M H	PS	PROBLEM SOLVING
	CHESS	ODESTA	69.96	AP	E M H	PS	PROBLEM SOLVING
	CLOCK	HARTLEY	39.95	AP	P	MA	TELLING TIME
	COMPUTER GRAPHING EXPERIMENTS	ADD-WESLEY	141.00	AP	H	MA	ALGEBRA
	COMPUTER MATH GAMES	ADD-WESLEY	324.00	AP	E M	MA	ARITHMETIC
	CREATE VOCABULARY	HARTLEY	26.95	AP	E M	LA	VOCABULARY
	DISCOVER BASIC	STER SWIFT	74.95	AP	M H	CS	PROGRAMMING
	EXPANDED NOTATION	HARTLEY	29.95	AP	E	MA	ARITHMETIC
	JUGGLES' RAINBOW	TLC		AP	P	PR	READINESS
	LESSONS IN ALGEBRA	GEO EARL	29.95	AP	M	MA	ALGEBRA
	MATH FACTS/NUMBER & MATH MSTRY	COLORADO	75.00	AP	E	MA	ARITHMETIC
	MATH SKILLS: ELEMENTARY	BRITANNICA	74.00	AP	E	MA	ARITHMETIC
	MULTIPLE SKILLS	HARTLEY	92.95	AP	P	LA	SPELLING
	NUMBER WORDS, LEVEL 1	HARTLEY	26.95	AP	E	MA	ARITHMETIC
	NUMBER WORDS, LEVEL 2	HARTLEY	29.95	AP	E	MA	ARITHMETIC
	ODIN	ODESTA	49.95	AP	E M H	PS	PROBLEM SOLVING
	OUR WEIRD & WACKY WORLD: COMP	ED'L ACTV	39.95	AP	E	LA	READING
	OUR WEIRD & WACKY WORLD: RDG	ED'L ACTV	39.95	AP	E	LA	READING
	PHONET	TIES	49.95	AP	E	LA	READING
	PRESCRIPTIVE MATH DRILL	HARTLEY	79.95	AP	E M	MA	ARITHMETIC
	PROGRAMMABLE CUBE, THE	METACOMET	34.95	AP	H	CS	PROGRAMMING
	SIMS	TIES	49.95	AP	E	LA	SPELLING
	THREE MILE ISLAND	MUSE	39.95	AP	H	SC	PHYSICS
	VOWELS	HARTLEY	93.95	AP	E	LA	GRAMMAR
	WHO, WHAT, WHERE, WHEN	HARTLEY	35.95	AP	E	LA	READING
COUNT:	26						
07	ARITH-MAGIC	QED	35.00	AP	E M	MA	ARITHMETIC
	BUMBLE GAMES	TLC	39.95	AP	E	PS	PROBLEM SOLVING
	BUMBLE PLOT	TLC	39.95	AP	E M	PS	PROBLEM SOLVING
	CARIS	BRITANNICA	74.00	AP	P	LA	READING
	CHEMISTRY: ACIDS AND BASES	BRITANNICA	74.00	AP	H	SC	CHEMISTRY
	COMPUTER MATH ACTIVITIES, V-1	ADD-WESLEY	56.00	AP	E M	MA	ARITHMETIC
	COMPUTER MATH ACTIVITIES, V-2	ADD-WESLEY	56.00	AP	E M	MA	ARITHMETIC
	COMPUTER MATH ACTIVITIES, V-3	ADD-WESLEY	56.00	AP	E M	MA	ARITHMETIC
	COMPUTER MATH ACTIVITIES, V-4	ADD-WESLEY	56.00	AP	E M	MA	ARITHMETIC
	DECISION SHOP, THE	CHONS MSM		AP	E M	SS	ECONOMICS
	DIVISION 1	SCOTT FORS	39.95	TI	E	MA	ARITHMETIC
	DRAGON MIX	DLM	39.00	AP	E M	MA	ARITHMETIC
	EARL'S WORD POWER	GEO EARL	29.95	AP	E M H	LA	VOCABULARY
	ELEMENTARY MATH	MECC	49.95	AP	E M	MA	ARITHMETIC

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	GEOGRAPHY	MECC	37.00	AT	E M	SS	GEOGRAPHY
	KRELL'S COLLEGE BOARD SAT	KRELL	249.95	AP	H	MA LA	MISC.
	MARKET PLACE, THE	MECC	36.00	AT	E M	SS	ECONOMICS
	MATH SKILLS: JUNIOR HIGH	BRITANNICA	74.00	AP	M	MA	ARITHMETIC
	MIXED NUMBERS	MILT BRAD	44.95	AP	E M	MA	ARITHMETIC
	MOPTOWN	TLC	50.00	AP	E M	PS	PROBLEM SOLVING
	PRECISION TIMER	VERNIER	39.95	AP	H	SC	PROCESS
	READING FLIGHT	SCOTT FORS	54.95	TI	E	LA	READING
	READING RALLY	SCOTT FORS	54.95	TI	E	LA	READING
	READING ROUNDUP	SCOTT FORS		TI	E	LA	READING
	WORD GAMES	MECC	37.00	AT	E	LA	SPELLING
	WORDWRIGHT	BRITANNICA	299.00	AP	E M H	LA	VOCABULARY
COUNT:		26					
08	ALPINE SKIER	DATA COMM	118.75	AP	M	LA	READING
	BRIDGE TO TERABITHIA	SUNBURST	25.00	AP	M	LA	READING
	CALL OF THE WILD	A/V CONC	189.00	AP	E M	LA	READING
	CAREER DIRECTIONS	JEFFERSON	59.95	AP	H	CG	CAREER
	CARTELS AND CUTTHROATS	STRAT SIMS	39.95	AP	H	SS	ECONOMICS
	DECIMAL SKILLS	MILT BRAD	44.95	AP	E M	MA	ARITHMETIC
	DIASCRIPTIVE READING	ED'L ACTV	365.00	AP	E M	LA	READING
	ELEMENTARY VOLUME 6: SOC. ST.	MECC	41.00	AP	E M	SS	MISC.
	ENGLISH, VOLUME 1	MECC	39.00	AP	M	LA	MISC.
	FACEMAKER	SPINNAKER	34.95	AP	P	PR	READINESS
	FLOPPY TEACHES HOW TO PRINT	FLOPPY	34.95	AP	P	PR	READINESS
	MAP READING	MICRO P&L	19.95	AP	E M	SS	GEOGRAPHY
	MASTER TYPE	LIGHTNING	39.95	AP	M H	BE	TYPING
	MATHEMATICS ASSMT/PRESC 5-7	READ DIG	129.00	AP	E M	MA	ARITHMETIC
	PRESIDENT ELECT	STRAT SIMS	39.95	AP	M H	SS	GOVERNMENT
	READ AND SOLVE MATH PROBLEMS	ED'L ACTV	98.00	AP	E	MA	PROBLEM SOLVING
	RHYMES AND RIDDLES	SPINNAKER	29.95	AP	P	LA	READING
	RIDDLE ME THIS	DATA COMM	85.25	AP	E M	LA	GRAMMAR
	SOCIAL STUDIES, VOLUME 2	MECC	41.00	AP	M H	SS	MISC.
	STORY MACHINE	SPINNAKER	39.95	AP	P	LA	WRITING
	TEASERS BY TOBBS	SUNBURST	35.00	AP	E M	MA	ARITHMETIC
	TENNIS ANYONE?	DATA COMM	170.75	AP	E M	LA	READING
	VOCABULARY SKILLS: CONTEXT CLU	MILT BRAD	44.95	AP	M	LA	VOCABULARY
	VOCABULARY SKILLS: PREF,SUF,RT	MILT BRAD	44.95	AP	M	LA	VOCABULARY
	WESTING GAME, THE	SUNBURST	25.00	AP	M	LA	READING
	WORD MASTER	DLM	44.00	AP	M	LA	VOCABULARY
	WORD MEMORY PROGRAM	INST/COMM	65.00	AP	P	LA	READING
COUNT:		27					
09	ADVERTISING TECHNIQUES	MICRO P&L	24.95	AP	M H	LA	WRITING
	BIG DOOR DEAL	DATA COMM	113.75	AP	M H	LA	READING
	BIOLOGY: THE CELL	BRITANNICA	125.00	AP	H	SC	BIOLOGY
	CAREER SCAN IV	NAT'L ED	169.00	AP	M H	CG	CAREER
	CLOZE PLUS (CONTEXT ANALYSIS)	INST/COMM	150.00	AP	P	LA	READING
	COMPUTER LITERACY: INTRO.	CNTRL DATA	60.00	AP	M H	CS	LITERACY
	COMPUTER MATH ACTIVITIES, V-5	ADD-WESLEY	56.00	AP	E M	MA	ARITHMETIC
	DECIMALS PRACTICE	CNTRL DATA	60.00	AP	E M	MA	ARITHMETIC
	EXPLORING AMERICA SERIES, THE	AQUARIUS	169.00	AP	M H	SS	GEOGRAPHY
	FRACTIONS PRACTICE	CNTRL DATA	60.00	AP	E M	MA	ARITHMETIC

MICROSIFT INDEX: BY SETS 11/85

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	FRENCH VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	FL	FRENCH
	GERMAN VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	FL	GERMAN
	GERMAN/RUSSIAN HANGMAN, THE	GEO EARL	29.95	AP	H	FL	GERMAN RUSSIAN
	GRAMMAR AND WRITING	BRITANNICA	229.00	AP	E	LA	WRITING
	LE VOCABULAIRE FRANCAIS	ISL SOFTWR	25.00	AP	M H	FL	FRENCH
	MIND BENDERS, A3	MIDWEST PC	49.95	AP	E M H	PS	LOGIC
	MIND BENDERS, B1	MIDWEST PC	49.95	AP	E M H	PS	LOGIC
	PERSONAL GRAPHICS	LITTLE	14.50	AP	H	CS	PROGRAMMING
	PHYSICS: ELEMENTARY MECHANICS	CNTRL DATA	70.00	AP	H	SC	PHYSICS
	PIK-PEK-PUT	DATA COMM	227.50	AP	E M	LA	READING
	SPANISH VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	FL	SPANISH
	SPECIAL NEEDS VOLUME 1: SPLLNG	MECC	44.00	AP	E	LA	SPELLING
	SPORTS STATS	TIES	59.95	AP	M H	IT	STUDENT RECORDS
	STICKYBEAR NUMBERS	WEEK READ	39.95	AP	P	PR	READINESS
	TANK TACTICS	DATA COMM	197.50	AP	E M H	LA	READING
	VERB VIPER	DLM	44.00	AP	E	LA	GRAMMAR
	WHOLE NUMBERS PRACTICE	CNTRL DATA	60.00	AP	E M	MA	ARITHMETIC
	WORD INVASION	DLM	44.00	AP	E M	LA	VOCABULARY
	WORDMAN	DLM	44.00	AP	E	LA	VOCABULARY
COUNT:	29						
10	ANTONYM GAME, THE	J & S	29.95	AP	H	LA	VOCABULARY
	ARBPLOT	CONDUIT	125.00	AP	H	MA	CALCULUS
	BIOLOGY: ENERGY AND LIFE	BRITANNICA	133.00	AP	H	SC	BIOLOGY
	CHAMBERS OF VOCAB	READ DIG	39.95	AP	E M H	LA	VOCABULARY
	COMPU-MATH: FRACTIONS	EDU-WARE	49.00	AP	M H	MA	ARITHMETIC
	DECIMALS	QED	120.00	AP	E M	MA	ARITHMETIC
	DIVISION SKILLS	MILT BRAD	44.95	AP	E M	MA	ARITHMETIC
	ELECTRONIC BLACKBOARD: FUNCT.	WADSWORTH	50.00	AP	H	MA	ALGEBRA
	ELECTRONIC BLACKBOARD: TRIG.	WADSWORTH	75.00	AP	H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE: D-I	WADSWORTH	49.95	AP	H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE: D-II	WADSWORTH	49.95	AP	H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE: D-III	WADSWORTH	49.95	AP	H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE: D-IV	WADSWORTH	49.95	AP	H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE: D-V	WADSWORTH	49.95	AP	H	MA	ALGEBRA
	GRAPHING EQUATIONS	CONDUIT	60.00	AP	H	MA	ALGEBRA
	MATHWIZ	MERRITT	100.00	CO	E M	MA	ARITHMETIC
	MONEY MANAGER, THE	STER SWIFT	80.00	AP	H	MA	ARITHMETIC
	PUNCTUATION SKILLS: COMMAS	MILT BRAD	44.95	AP	E M	LA	GRAMMAR
	PUNCTUATION SKILLS: END MARKS	MILT BRAD	44.95	AP	E M	LA	GRAMMAR
	RAINBOW GRAPHICS	BLUE H	22.95	AP	M H	IT	GRAPHICS
	SPELLING WIZ	DLM	44.00	AP	E	LA	SPELLING
	SUBTRACTING MIXED FRACTIONS	MIC WRKSHP	24.95	AP	E M	MA	ARITHMETIC
	VOCABULARY I, PLURALS, SENT.	COLORADO	75.00	AP	E M	LA	MISC.
	WORD RADAR	DLM	44.00	AP	P	LA	READING
COUNT:	24						
11	ALGEBRA DRILL AND PRACTICE II	CONDUIT	125.00	AP	M H	MA	ALGEBRA
	ALIEN ACTION	DLM	39.00	AP	E	IT	SHELL
	BASIC ENGLISH SKILLS: SENTENCE	BRITANNICA	349.00	AP	E M	LA	GRAMMAR
	BASIC NUMBER FACTS	CNTRL DATA	49.95	AP	E	MA	ARITHMETIC
	BASIC PROGRAMMING	ORION	69.95	AP	M H	CS	PROGRAMMING
	CAPITALIZATION PLUS	MIC WRKSHP	39.95	AP	E M H	LA	GRAMMAR

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	CLASSIFY	DIV ED ENT	70.00	AP	H	SC	BIOLOGY
	CLOZE-PLUS, LEVEL H	INST/COMM	150.00	AP	M	LA	READING
	DIASCRIPTIVE READING I	ED'L ACTV	295.00	AP	E	LA	READING
	EARLY GAMES FOR YOUNG CHILDREN	SPRINGBD	29.95	AP	P	PR	READINESS
	EARLY GAMES: FRACTION FACTORY	SPRINGBD	29.95	AP	E M	MA	ARITHMETIC
	EARLY GAMES: MATCHMAKER	SPRINGBD	29.95	AP	P	PR	READINESS
	EARLY GAMES: MUSIC	SPRINGBD	29.95	AP	E	MU	MUSIC
	EARLY GAMES: PIECE OF CAKE	SPRINGBD	29.95	AP	E M	MA	ARITHMETIC
	ELECTRIC ENGLISH	TIES	150.00	AP	M	LA	GRAMMAR
	FLOPPY TEACHES WHAT IS MISSING	FLOPPY	29.95	AP	P	PR	READINESS
	GREETING CARDS	COMP SKILL	39.95	AP	E M H	LA	WRITING
	INTRODUCTORY ALGEBRA	AVANT GARD	29.95	AP	M H	MA	ALGEBRA
	KEY LINGO	READ DIG	39.95	AP	M H	LA	VOCABULARY
	KEYBOARDING FOR INFORMATION	CNTRL DATA	49.95	AP	E M H	BE	TYPING
	LOGIC AND EUCLIDEAN GEOMETRY	AVANT GARD	29.95	AP	H	MA	GEOMETRY
	LOGIC GATES	TIES	40.00	AP	H	SC	PHYSICS
	LOLLIPOP DRAGON	SVE	359.00	AP	P	CS	LITERACY
	MATH 1-2-3 FOUR PACK: COUNTING	MICROED	34.95	CO	P	MA	ARITHMETIC
	MATHFISH	SONIUS	12.95	CO	E	MA	ARITHMETIC
	MEDALIST, THE - STATES	HARTLEY	39.95	AP	E M	SS	GEOGRAPHY
	PROCESSING POWER PROGRAM	INST/COMM	180.00	AP	E	LA	READING
	QUIZAGON	SPRINGBD	39.95	AP	H	MISC.	MISC.
	RAILS WEST!	STRAT SIMS	39.95	AP	M H	SS	HISTORY
	REEF OF GOLD, THE	BRITANNICA	49.00	AP	E	LA	READING
	SAME AND DIFFERENT	FLOPPY	29.95	AP	P	PR	READINESS
	SCHOLASTIC SPELLING	SCHOLASTIC	69.95	TI	E	LA	SPELLING
	SPECIAL PRODUCTS & ALG. FACTOR	AVANT GARD	29.95	AP	H	MA	ALGEBRA
	SPEED/BINGO MATH	COMMODORE	19.95	CO	E M	MA	ARITHMETIC
	STICKYBEAR ABC	WEEK READ	39.95	AP	P	PR	READINESS
	U.S. CONSTITUTION TUTOR	MICRO LAB	30.00	CO	M H	SS	GOVERNMENT
	VECTORS AND GRAPHING, VOL. I	CROSS	15.00	AP	H	SC	PHYSICS
COUNT:	37						
12	50 DEFENSE VS RUN	STER SWIFT	99.95	AP	M H	PE	ATHLETICS
	ALGEBRA ARCADE	WADSWORTH	49.95	AP	M H	MA	ALGEBRA
	ALLIGATOR ALLEY	DLM	44.00	AP	P E M	IT	SHELL
	BEGINNING COMPOSITION	BEHV ENGIN	34.95	AP	M H	LA	WRITING
	BUDGETING SIMULATION	EMC PUB	55.00	AP	M H	MA	ARITHMETIC
	BUDGETING TUTORIAL	EMC PUB	55.00	AP	M H	MA	ARITHMETIC
	CHARGED PARTICLES II	VERNIER	24.95	AP	M H	SC	PHYSICS
	CIRCUIT LAB	API	24.95	AT	M H	SC	PHYSICS
	COMPOSITION STRATEGY	BEHV ENGIN	39.95	AP	M H	LA	WRITING
	ELECTRONIC BLACKBOARD SERIES: ALGEBRA	WADSWORTH	95.00	AP	M H	MA	ALGEBRA
	ELECTRONIC STUDY GUIDE - SYSTEM OF EQUATIONS/INEQUALS	WADSWORTH	49.95	AP	M H	MA	ALGEBRA
	FOUR-LETTER WORDS	CONDUIT	50.00	AP	M H	LA	VOCABULARY
	IDEA INVASION	DLM	44.00	AP	P E M	IT	SHELL
	KINEMATICS II	VERNIER	24.95	AP	M H	SC	PHYSICS
	LETTER MAN	BEHV ENGIN	34.95	AP	E M	BE	TYPING
	MATHEMATICS LIFE SKILLS, VOL 2	COMP AGE	29.95	AP	M H	MA	ARITHMETIC

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	WORLD OF WORK						
	NUMBER BOWLING/SPACE JOURNEY	SCOTT FORS	39.95	TI	E M	MA	ARITHMETIC
	NUMERATION 1	SCOTT FORS	39.95	TI	P E	MA	ARITHMETIC
	NUMERATION 2	SCOTT FORS	39.95	TI	E	MA	ARITHMETIC
	NUTRITION SIMULATION	EMC PUB	49.95	AP	M H	HE	NUTRITION
	NUTRITION TUTORIAL	EMC PUB	55.00	AP	M H	HE	NUTRITION
	ORBIT II	VERNIER	24.95	AP	M H	SC	PHYSICS
	PICNIC	COMP SKILL	39.95	AP	E M H	LA	VOCABULARY
	PROJECTILES II	VERNIER	24.95	AP	M H	SC	PHYSICS
	PYRAMID PUZZLER	SCOTT FORS	39.95	TI	E	MA	ARITHMETIC
	SHIP AHOY/WORD SCRAMBLE	COMP SKILL	39.95	AP	E M H	LA	VOCABULARY
	STAR MAZE	SCOTT FORS	39.95	TI	E	MA	ARITHMETIC
	TELLSTAR	SCHARF SFT	39.95	AP	M H	SC	ASTRONOMY
	THAT'S MY STORY	LEARN WELL	59.95	AP	E M H	LA	WRITING
	TRIBBLES	CONDUIT	40.00	AP	M H	SC	PROCESS
	TYPING STRATEGY	BEHV ENGIN	39.95	AP	M H	BE	TYPING
	VECTOR ADDITION II	VERNIER	24.95	AP	M H	SC	PHYSICS
	WAVE ADDITION II	VERNIER	24.95	AP	H	SC	PHYSICS
	WIZ WORKS	DLM	44.00	AP	P E M	IT	SHELL
COUNT:	34						
13	ADDITION LOGICIAN	MECC	43.00	AP	P	MA	ARITHMETIC
	ANAGRAMAS HISPANOAMERICANOS	GESSLER	29.95	AP	M H	FL	SPANISH
	ELECTRONIC STUDY GUIDE FOR TRIGONOMETRY	WADSWORTH	49.95	AP	H	MA	TRIGONOMETRY
	EXPLORING TABLES AND GRAPHS	WEEK READ	34.95	AP	E	MA	GRAPHING
	GEOART	VENTURA	39.95	AP	E M H	MA	GEOMETRY
	GEOGRAPHY SERIES: NEW ENGLAND	INTEL SOFT	29.95	AP	M	SS	GEOGRAPHY
	LA CORRIDA DE TOROS	GESSLER	29.95	AP	M H	FL	SPANISH
	LINGUIST, THE	GESSLER	44.95	AP	M H	FL	MISC.
	MISSION: ALGEBRA	DESIGNWARE	44.95	AP	H	MA	ALGEBRA
	MOTS CROISES ET MOT SECRET	GESSLER	24.95	AP	H	FL	FRENCH
	NUMBER FARM	DLM	29.95	AP	P	MA	ARITHMETIC
	OBSERVATORY, THE	LIGHTSPEED	62.50	AP	H	SC	ASTRONOMY
	OSMOTIC PRESSURE	CONDUIT	50.00	AP	H	SC	BIOLOGY
	PLATO FRENCH SERIES	CNTRL DATA	39.95	AP	M H	FL	FRENCH
	PLATO GERMAN SERIES	CNTRL DATA	39.95	AP	M H	FL	GERMAN
	PLATO SPANISH SERIES	CNTRL DATA	39.95	AP	M H	FL	SPANISH
	POKER PARAT	GESSLER	39.95	AP	M H	FL	GERMAN
	PRACTICAL GRAMMAR PART I: PRINCIPAL PARTS OF VERBS	INTEL SOFT	34.95	AP	H	LA	GRAMMAR
	PRACTICAL GRAMMAR: COMPLEX SENTENCES - ADJECTIVE CLAUSES	INTEL SOFT	34.95	AP	H	LA	GRAMMAR
	RATIO AND PROPORTION	ED'L ACTV	59.95	AP	M H	MA	ARITHMETIC
	READING ADVENTURE I	INTEL SOFT	39.95	AP	P	LA	READING
	SAVOIR ECRIRE	GESSLER	45.95	AP	E	FL	FRENCH
	TRAP-A-ZOID	DESIGNWARE	39.95	AP	E M H	MA	GEOMETRY
	U.S. GEOGRAPHY QUIZ	INTEL SOFT	29.95	AP	M H	SS	GEOGRAPHY

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	VOCABULARY ADVENTURE I	INTEL SOFT	59.95	AP	E	LA	VOCABULARY
COUNT:	25						
14	ADDITION AND SUBTRACTION	GAMCO	39.95	AP	E	MA	ARITHMETIC
	ADDITION AND SUBTRACTION, 6-10	COMP ED	21.95	AP	P	MA	ARITHMETIC
	ANDY AND THE MATH-A-SIZER	ALADDIN	29.95	RS	E	MA	ARITHMETIC
	BANK STREET STORYBOOK	MINDSCAPE	49.95	AP	E M	LA	WRITING
	BASIC SKILLS COURSEWARE: GRD 3	LANG-FORD	325.00	AP	P	MA LA	MISC.
	BASIC SKILLS COURSEWARE: GRD 5	LANG-FORD	325.00	AP	E	MA LA	MISC.
	BASIC SKILLS COURSEWARE: GRD 9	LANG-FORD	325.00	AP	H	MA LA	MISC.
	BEGINNING CONSONANTS AND ENDING CONSONANTS	COMP ED	21.95	AP	P	LA	READING
	BUZZ, BANG, HARVEY	INTEL SOFT	29.95	AP	E	MA	ARITHMETIC
	CREATURE CREATOR	DESIGNWARE	29.95	AP	P	CS	PROGRAMMING
	DINOSAUR DAYS	TYC	39.95	AP	E	SC	LIFE SCIENCE
	EARLY LEARNING SERIES: VOL. 1	ED COMPR	99.95	AP	P	PR	READINESS
	ENGLISH SAT II	MICRO LAB	35.00	AP	H	LA	MISC.
	EXPLORING SORTING ROUTINES	MECC	36.00	AP	H	CS	PROGRAMMING
	FAY: THAT MATH WOMAN	DIDATECH	29.95	AP	P	MA	ARITHMETIC
	FOREIGN LANGUAGE SERIES: LATIN	ISL SOFTWR	20.00	AP	M H	FL	LATIN
	GREEK MYTHOLOGY	TYC	39.95	AP	M H	LA	LITERATURE
	LEARN ABOUT NUMBERS	C & C SOFT	40.00	AP	P	MA	ARITHMETIC
	LETTERS AND FIRST WORDS	C & C SOFT	50.00	AP	P	PR	READINESS
	MATHEMATICS LIFE SKILLS, VOLUME 1: MONEY MANAGER	COMP AGE	29.95	AP	M H	MA	ARITHMETIC
	MATHEMATICS WORD PROBLEMS - GRADE 1	INTEL SOFT	24.95	AP	P	MA	ARITHMETIC
	MIND BENDERS, A1, A2, AND A3	MIDWEST PC	39.95	AP	M H	PS	LOGIC
	MODERN BIOLOGY STUDY DISK	HOLT	99.00	AP	M H	SC	BIOLOGY
	PAYROLL SYSTEM: A BUSINESS SIMULATION	MECC	49.00	AP	H	BE	ACCOUNTING
	POKER LISTO	GESSLER	39.95	AP	M H	FL	SPANISH
	PRACTICAL ALGEBRA: ALGEBRA WORD PROBLEMS	INTEL SOFT	49.95	AP	H	MA	ALGEBRA
	PRACTICAL GEOMETRY SERIES: TRIANGLES	INTEL SOFT	65.00	AP	H	MA	GEOMETRY
	PRESCHOOL ACTIVITIES FOR LEARNING	ED'L ACTV	65.00	AP	P	PR	READINESS
	PURCHASE POWER	COMP AGE	29.95	AP	M H	MA	ARITHMETIC
	READING KLOOZ	MIDWEST PC	39.95	AP	M	LA	READING
	SANTA FE TRAIL	ED'L ACTV	59.95	AP	E M H	SS	HISTORY
	SPANISH VOCABULARY GAME	INTEL SOFT	39.95	AP	M H	FL	SPANISH
	SPECIAL TOPICS IN MATHEMATICS:	INTEL SOFT	29.95	AP	M H	MA	ALGEBRA

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	BASES OTHER THAN TEN						
	SPELLAGRAPH	DESIGNWARE	39.95	AP	P E	LA	SPELLING
	SPELLING WORKSHEET GENERATOR	STER SWIFT	49.95	AP	E M H	LA	SPELLING
	SPORTS PROBLEMS III	INTEL SOFT	39.95	AP	H	MA	PROBLEM SOLVING
	T. REX	HOLT	49.95	AP	M H	SC	LIFE SCIENCE
	VOYAGE OF THE MIMI: INTRODUCTION TO COMPUTING	HOLT	122.25	AP	M	CS	PROGRAMMING
	WORD BENDERS - PHRASES, A1	MIDWEST PC	39.95	AP	M H	LA	VOCABULARY
	WORD BENDERS-SIMILARITIES, C-1	MIDWEST PC	39.95	AP	M H	LA	VOCABULARY
	WORDFINDER	HOLT	34.95	CO	M H	LA	VOCABULARY
COUNT:	41						
15	ADDITION CIRCUS	GAMCO	39.95	AP	P	MA	ARITHMETIC
	ALGEBRA SERIES	MIC WRKSHP	24.95	AP	M H	MA	ALGEBRA
	ALPHABET HARVEY	INTEL SOFT	39.95	AP	P E M	LA	ALPHABETIZING
	CONTENT AREA READING: LIT	GAMCO	39.95	AP	E M H	LA	READING
	CRYPTO CUBE	DESIGNWARE	39.95	AP	P E M H	LA	SPELLING
	DECIMALS: MULT. AND DIVISION	GAMCO	39.95	AP	E M	MA	ARITHMETIC
	FAY'S WORD RALLY	DIDATECH	49.95	AP	P E	LA	READING
	FOOD FOR THOUGHT	MARSHWARE	39.95	AP	P E M	HE	NUTRITION
	FRACTION FUN WITH FRACTION MAN	EDULINK	39.95	AP	E	MA	ARITHMETIC
	GRAMMAR EXAMINER, THE	DESIGNWARE	44.95	AP	E M H	LA	GRAMMAR
	LANGUAGE ARTS: PARTS OF SPEECH	HOUGHTON	225.00	AP	P E M	LA	GRAMMAR
	MATH MAZE	DESIGNWARE	39.95	AP	P E	MA	ARITHMETIC
	MATHEMATICS - GRADE 3	INTEL SOFT	79.95	AP	P	MA	ARITHMETIC
	MATHEMATICS ACTIVITIES CRSWR-4	HOUGHTON	150.00	AP	E	MA	ARITHMETIC
	MATHEMATICS ACTIVITIES CRSWR-7	HOUGHTON	165.00	AP	M	MA	PROBLEM SOLVING
	MATHSHEET	HOUGHTON	99.00	AP	P E M	MA	ARITHMETIC
	MORE POWERS TO YOU!	MICRO LAB	35.00	AP	M H	MA	ALGEBRA
	MYTHS, MAGIC AND MONSTERS	MICRO LAB	35.00	IB	E M	LA	READING
	PLAY ON WORDS	INTEL SOFT	29.95	AP	E	LA	PROBLEM SOLVING
	POLITICAL GENIE	BORING	54.95	IB	M H	SS	GOVERNMENT
	SPELLAKAZAM	DESIGNWARE	29.95	AP	P E	LA	SPELLING
	SPELLICOPTER	DESIGNWARE	39.95	AP	P E	LA	SPELLING
	STATES	VENTURA	39.95	AP	E M	SS	GEOGRAPHY
	STATES AND CAPITALS	GAMCO	39.95	AP	E M H	SS	GEOGRAPHY
	SUPERMIND	ED'L ACTV	69.00	AP	E M	LA	READING
	TYPING	GAMCO	39.95	AP	E M H	BE	TYPING
	VERBS: ACTION/LINKING VERBS	INTEL SOFT	29.95	AP	E M	LA	GRAMMAR
COUNT:	27						
16	4-H DING DARLING PROJECT	HEARTLAND	30.00	AP	E M	SC	ENVIRONMENT
	ABC'S OF PROGRAMMING YOUR APPLE, THE	ABC	69.95	AP	M H	CS	PROGRAMMING
	ARITH-MAGIC II	QED	35.00	AP	E M H	MA	ARITHMETIC
	BASICS OF BASIC, THE	FOCUS	99.00	AP	M H	CS	PROGRAMMING
	BIOLOGY CHALLENGE	ISL SOFTWR	29.95	AP	H	SC	BIOLOGY
	BRAIN BOOSTER	TRILLIUM	29.95	AP	P E M H	PS	PROBLEM SOLVING

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	COMPUTER SCIENCE I	MIC WRKSHP	24.95	AP	H	CS	PROGRAMMING
	COSMIC CARNIVAL	WALT DISNY	59.95	AP	M H	SS	ECONOMICS
	COUNTDOWN, TEST SIMULATOR, AUTHORING, MANAGEMENT SYSTEM	TYSON	49.95	AP	P E M H	IT	SHELL
	DISCOVER: A SCIENCE EXPERIMENT	SUNBURST	55.00	AP	E M H	SC	PROCESS
	EARTH SCIENCE SERIES: HYDROLOGIC CYCLE	IBM	49.00	IB	H	SC	EARTH SCIENCE
	EARTH SCIENCE SERIES: GROUND WATER	IBM	49.00	IB	M H	SC	EARTH SCIENCE
	EARTH SCIENCE SERIES: SURFACE WATER	IBM	49.00	IB	H	SC	EARTH SCIENCE
	EARTH SCIENCE SERIES: MOISTURE IN THE ATMOSPHERE	IBM	49.00	IB	H	SC	EARTH SCIENCE
	FOOD GROUP PUZZLES	MARSHWARE	39.95	AP	P E M	HE	NUTRITION
	GALACTIC PROSPECTOR	WALT DISNY	59.95	AP	M H	SC	EARTH SCIENCE
	GRAPHICAL ANALYSIS II	VERNIER	24.95	AP	H	SC	PROCESS
	GUIDEMASTER - BORROWING: REGROUPING FOR SUBTRACTION	RENAISSANCE	45.00	AP	P E	MA	ARITHMETIC
	HOLT READING SKILLS EXTENDER 3	HOLT	249.00	AP	P	LA	READING
	HOMETOWN	ACTIVE LRN	148.00	AP	E M H	SS	GEOGRAPHY
	HOW A BILL BECOMES A LAW	INTEL SOFT	59.95	AP	M H	SS	GOVERNMENT
	HOW TO WEIGH AN ELEPHANT	LEARN TECH	29.95	AP	P	MA	MEASUREMENT
	INTERNAL JOURNEY	WALT DISNY	59.95	AP	M H	SC	BIOLOGY
	LAW IN AMERICAN HISTORY	INTEL SOFT	45.00	AP	M H	SS	HISTORY
	MAGIC CASH REGISTER, THE	AVANT GARD	34.95	AP	P E	MA	ARITHMETIC
	MATH POWER PROGRAM: WHOLE NO.	INST/COMM	160.00	AP	P E	MA	ARITHMETIC
	MATH WORLDS: EXPLORING MATH WITH COMPUTERS	DC HEATH	249.00	AP	E M H	MA	MISC.
	MICROCOURSE MATHEMATICS: SOLVING STORY PROBLEMS:WN 3-6	HOUGHTON	524.95	AP	P E	MA	ARITHMETIC
	MODELER: MOLECULAR DESIGN ED.	COMPRESS	75.00	AP	H	SC	CHEMISTRY
	OPERATION FROG	SCHOLASTIC	59.95	AP	E M H	SC	BIOLOGY
	PAVE - PERCEPTUAL ACCURACY/ VISUAL EFFICIENCY TRAINING	INST/COMM	80.00	AP	P E M H	LA	READING
	PHYSICAL SCIENCE DATABASES FOR PFS:FILE	SCHOLASTIC	99.95	AP	M H	SC	PHYSICAL SCIENCE
	PROBLEM SOLVING IN ALGEBRA	BRITANNICA	329.00	AP	H	MA	ALGEBRA
	PROPORTIONS AND PER CENTS	QED	199.00	AP	E M H	MA	ARITHMETIC
	QUIZWHIZ	HARPER	29.95	AP	P E M H	IT	SHELL
	RELEVANT READING THROUGH	AQUARIUS	29.95	AP	P E M	LA	READING

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	SCIENCE I, II, III AND IV						
	SCIENCE TRIVIA CHALLENGE	SPECTRUM	16.00	AP	P E M	SC	GENERAL SCIENCE
	SCRAMBLE EGGS	LEARN TECH	24.95	CO	P E M	PS	LOGIC
	SECRETS OF SCIENCE ISLAND	GROLIER	39.95	AP	P E M H	SC	GENERAL SCIENCE
	SHARK ATTACK! - MATH SERIES	MIDWEST PC	39.95	AP	P E M	MA	ARITHMETIC
	SOLAR READING: FLIGHT 1 - CENTRAL THOUGHT	LRN MICSYS	60.00	AP	P E	LA	READING
	SORTING TECHNIQUES I, II	MIC WRKSHP	24.95	AP	H	CS	PROGRAMMING
	STATES & TRAITS	DESIGNWARE	44.95	AP	P E M H	SS	GEOGRAPHY
	STICKYBEAR SPELLGRABBER	WEEK READ	39.95	AP	P E	LA	SPELLING
	STORY TREE	SCHOLASTIC	59.95	AP	E M H	LA	WRITING
	SUBJECT-VERB AGREEMENT	MIC WRKSHP	49.95	AP	M H	LA	GRAMMAR
	U.S. HISTORY DATABASES FOR PFS:FILE	SCHOLASTIC	99.95	AP	M H	SS	HISTORY
	VOYAGE OF THE MIMI, THE: ECOSYSTEMS	HOLT	122.25	AP	E M	SC	ENVIRONMENT
	VOYAGE OF THE MIMI, THE: BANK STREET LABORATORY	HOLT	302.25	AP	E M H	SC	PROCESS
	WHAT'S MY LOGIC?	MIDWEST PC	39.95	AP	P E M H	PS	PROBLEM SOLVING
	WORDMATH	MILLIKEN	195.00	AP	E M	MA	PROBLEM SOLVING
	WRITING WORKSHOP, THE	MILLIKEN	195.00	AP	P E M H	LA	WRITING
	YOU ARE WHAT YOU EAT	MARSHWARE	39.95	AP	M H	HE	NUTRITION
COUNT:	53						
L	ACID RAIN	DIV ED ENT	60.00	AP	E M H	SC	ENVIRONMENT
	AIR POLLUTION	EME	37.00	AP	M H	SC	ENVIRONMENT
	APPROX., ESTIM. & STNDRD FORM	SCOTT FORS	59.95	AP	M H	MA	MEASUREMENT
	ASTRONOMY: STARS FOR ALL SEASO	ED'L ACTV	59.00	AP	E M H	SC	ASTRONOMY
	ATARILAB	ATARI	99.00	AT	E M	SC	PROCESS
	BAFFLES	CONDUIT	50.00	AP	M	SC	PROCESS
	BIOMES AND FOOD WEBS	YAKER	39.00	AP	M H	SC	ENVIRONMENT
	BODY SYSTEMS	MICROED	34.95	CO	E M	SC	LIFE SCIENCE
	CAUSE AND EFFECT	MARSHWARE	39.95	AP	E M	SC	PROCESS
	CELL GROWTH AND MITOSIS	CLASRM CON	69.95	IB	M H	SC	BIOLOGY
	CHARACTERISTICS OF A SCIENTIST	CYGNUS	39.00	AP	M H	SC	PROCESS
	CHEMAID	VENTURA	39.95	AP	M H	SC	CHEMISTRY
	CHEMICAL ELEMENT GAME	SCOTT FORS	59.95	AP	E M	SC	CHEMISTRY
	CLASSIFICATION	MECC	36.00	AP	E M H	SC	PROCESS
	CLASSIFICATION OF LIVING THNGS	ED'L ACTV	59.00	AP	M H	SC	BIOLOGY
	CLIMATE	SCOTT FORS	59.95	AP	M H	SC	EARTH SCIENCE
	COMP-U-SOLVE	ED'L ACTV	109.00	AP	M H	MA	PROBLEM SOLVING
	COMPUTER BIOLOGY LAB: FROG	CROSS	30.00	AP	M H	SC	BIOLOGY
	CONNECTIONS	KRELL	99.95	AP	M H	SC	PROCESS
	DISCOVERING THE SCIENTIFIC METHOD	FOCUS	49.00	AP	E M H	SC	PROCESS

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	DISCOVERY LAB	MECC	44.00	AP	E M H	SC	PROCESS
	EARTH SCIENCE	MECC	46.00	AT	E M	SC	EARTH SCIENCE
	EARTH SCIENCE SERIES	TYC	68.50	RS	M H	SC	EARTH SCIENCE
	EAT SMART	PILLSBURY	19.75	AP	E M H	HE	NUTRITION
	ENERGY AND POWER	MICROED	34.95	CO	E M H	SC	PHYSICS
	ENERGY HOUSE	TIES	49.95	AP	E M	SC	ENVIRONMENT
	ENERGY SEARCH	MCGRAW HIL	180.00	AP	E M H	SC	ENVIRONMENT
	ENERGY SERIES	FOCUS	69.00	AP	M H	SC	PHYSICS
	EXPER. IN HUMAN PHYSIOLOGY	HRM SOFTWR	249.00	AP	M H	SC	PROCESS
	EXPERIMENTS IN SCIENCE	HRM SOFTWR	249.00	AP	M H	SC	PROCESS
	EXPLORER METROS: A METRIC ADV	SUNBURST	55.00	AP	E M	MA	MEASUREMENT
	FACTORY, THE	SUNBURST	49.00	AT	E M H	PS	PROBLEM SOLVING
	FOOD PROCESSOR, THE	ESHA	120.00	AP	M H	HE	NUTRITION
	FUN HOUSE MAZE	SUNBURST	55.00	AP	E M	PS	PROBLEM SOLVING
	GENETICS	TIES	49.95	AP	E M	SC	BIOLOGY
	GEOLOGY SEARCH	MCGRAW HIL	180.00	AP	E M	SC	EARTH SCIENCE
	GRAPHS AND CHARTS	MICROED	34.95	CO	E M	MA	GRAPHING
	HAWS: HOME AUTOMATIC WEATHER STATION	VAISALA	199.95	CO	M H	SC	EARTH SCIENCE
	HEALTH AWARENESS GAMES	HRM SOFTWR	99.00	AP	M H	HL SC	LIFE SCIENCE
	HEART SIMULATOR, THE	FOCUS	49.00	AP	E M H	SC	LIFE SCIENCE
	HEREDITY DOG	HRM SOFTWR	49.00	AP	H	SC	BIOLOGY
	HOME ENERGY CONSERVATION	EME	55.00	AP	M H	SC	ENVIRONMENT
	HOME ENERGY SAVINGS	HRM SOFTWR	35.00	AP	M H	SC	ENVIRONMENT
	IN SEARCH OF MOST AMAZING THNG	SPINNAKER	40.00	AT	M H	PS	PROBLEM SOLVING
	INCREDIBLE LABORATORY, THE	SUNBURST	55.00	AT	E M	SC	PROCESS
	INTERPRETING GRAPHS	CONDUIT	45.00	AP	M H	MA	GRAPHING
	INTROD. TO GENERAL CHEMISTRY	COMPRESS	470.00	AP	M H	SC	CHEMISTRY
	KING'S RULE, THE	SUNBURST	55.00	AP	P E M H	MA	PROBLEM SOLVING
	LAWS OF MOTION	EME	93.50	AP	M H	SC	PHYSICS
	LEAF: STRUCTURE & FUNCTION	CLASRM CON	69.95	IB	M H	SC	BIOLOGY
	LIMITING FACTORS AND CARRYING CAPACITY	YAKER	39.00	AP	M H	SC	ENVIRONMENT
	MATHEMATICS FOR SCIENCE SERIES I AND II	MERLAN	62.00	CO	E M H	MA SC	ARITHMETIC
	MATTER AND ENERGY	FOCUS	159.00	AP	M H	SC	PHYSICS
	METRIC I TO V	CLASRM CON	225.00	IB	M H	MA	MEASUREMENT
	MICRO GARDENER, THE	ED'L ACTV	59.00	AP	E M	SC	BIOLOGY
	MODELING	MECC	36.00	AP	M	SC	PROCESS
	NICHE: AN ECOLOGICAL GAME/SIMULATION	DIV ED ENT	70.00	AP	M H	SC	ENVIRONMENT
	NUTRITION AND FOOD GROUPS	MECC	36.00	AP	M	HE	NUTRITION
	NUTRITION-A BALANCED DIET	EME	35.00	AP	M H	HE	NUTRITION
	OH, DEER!	MECC	44.00	AP	M	SC	ENVIRONMENT
	PASSIVE TRANSPORT	CLASRM CON	69.95	IB	M H	SC	BIOLOGY
	PERSONAL ENERGY INVENTORY	HRM SOFTWR	39.00	AP	M H	SC	ENVIRONMENT
	PHOTOSYNTHESIS LIGHT ENERGY	CLASRM CON	69.95	IB	M H	SC	BIOLOGY
	PHYSICAL SCI BASEBALL-CHMSTRY	J & S	29.50	AP	M H	SC	CHEMISTRY

SET	TITLE	PRODUCER	PRICE	HRD	LEVEL	SUB	TOPIC
	PHYSICAL SCI PROG/BONDING	J & S	29.00	AP	M	SC	PHYSICAL SCIENCE
	PHYSICAL SCI PROG/RADIOACTIVIT	J & S	29.00	AP	M	SC	PHYSICAL SCIENCE
	PHYSICAL SCIENCE SERIES	MICROPHYS	250.00	CO	M	SC	PHYSICAL SCIENCE
	PHYSICS GEMS, VOLUME 12	CROSS	35.00	AP	M H	SC	PHYSICS
	PLANT GROWTH	CLASRM CON	69.95	IB	M H	SC	BIOLOGY
	PLATO'S CAVE	KRELL	49.95	AP	M H	SC	PROCESS
	POLLUTE/A SIM OF WATER POLLUT	DIV ED ENT	70.00	AP	H	SC	ENVIRONMENT
	POND ECOLOGY	SCOTT FORS	59.95	AP	E M	SC	ENVIRONMENT
	POWER GRID	HRM SOFTWR	59.00	AP	M H	SC	ENVIRONMENT
	PROBLEM SOLVING STRATEGIES	MECC	48.00	AP	E M	MA	PROBLEM SOLVING
	PROTOZOA	VENTURA	39.95	AP	M H	SC	BIOLOGY
	ROBOT ODYSSEY I	TLC	49.95	AP	M H	PS	PROBLEM SOLVING
	ROCKY'S BOOTS	TLC	49.95	AP	E M H	PS	PROBLEM SOLVING
	SCALES	SCOTT FORS	59.95	AP	M H	MA	MEASUREMENT
	SCIENCE CHALLENGES	MICROED	34.95	CO	E M	SC	MISC.
	SCIENTIFIC METHOD, THE	CYGNUS	39.00	AP	M H	SC	PROCESS
	SEM CALC: WORD PROBLEM SOLVER	SUNBURST	95.00	RS	M H	MA	PROBLEM SOLVING
	SIMPLE MACHINES	MICROED	34.95	CO	E M H	SC	PHYSICS
	SKIES ABOVE, THE/THE WATERS BELOW	AQUARIUS	115.00	AP	E M H	SC	EARTH SCIENCE
	SKY TRAVEL: A WINDOW TO OUR GALAXY	COMMODORE		CO	M H	SC	ASTRONOMY
	STAR SEARCH	EARTHWARE		AP	M H	SC	ASTRONOMY
	STELLAR ASTRONOMY	CROSS	30.00	AP	M H	SC	ASTRONOMY
	TEMPERATURE GRAPHER	HRM SOFTWR	75.00	AP	M H	SC	PROCESS
	THINK LIKE A SCIENTIST	MICRO LAB	35.00	AP	E M H	SC	PROCESS
	TIME & SEASONS	RAND MCNLY	111.00	AP	M H	SC	EARTH SCIENCE
	VISIBLE SOLAR SYSTEM	COMMODORE	29.95	CO	E M	SC	ASTRONOMY
	VISIFROG	VENTURA	39.95	AP	M H	SC	BIOLOGY
	VOYAGE OF THE MIMI, THE: MAPS AND NAVAGATION	HOLT	122.25	AP	E M	SC	EARTH SCIENCE
	WATER POLLUTION	EME	29.50	AP	M H	SC	ENVIRONMENT
	WEATHER	SCOTT FORS	59.95	AP	M H	SC	EARTH SCIENCE
	WEATHER COMMAND:A SCIENCE GAME	ED AUDIO	40.00	AP	E M H	SC	EARTH SCIENCE
	WEATHER FACTORS	MICROED	34.95	CO	E M H	SC	EARTH SCIENCE
	WHAT'S IN YOUR LUNCH	LAWR HALL	24.95	AP	M H	HE	NUTRITION
	WORM, THE	VENTURA	39.95	AP	M H	SC	BIOLOGY
	YOUR BODY - SERIES I & II	FOCUS	119.00	AP	E M H	SC	LIFE SCIENCE

COUNT: 99

COUNT: 506

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
BE	ACCOUNTING	PAYROLL SYSTEM: A BUSINESS SIMULATION	MECC	49.00	AP	H	14
	TYPING	TYPING	GAMCO	39.95	AP	E M H	15
		TYPING STRATEGY	BEHV ENGIN	39.95	AP	M H	12
		LETTER MAN	BEHV ENGIN	34.95	AP	E M	12
		KEYBOARDING FOR INFORMATION	CNTRL DATA	49.95	AP	E M H	11
		TOUCH TYPING	COVE VIEW	24.95	RS	M H	04
		NUMERIC DATA ENTRY PRACTICE	RADIO SHAK	39.95	RS	H	04
		MASTER TYPE	LIGHTNING	39.95	AP	M H	08
CG	CAREER	CAREER SCAN IV	NAT'L ED	169.00	AP	M H	09
		CAREER DIRECTIONS	JEFFERSON	59.95	AP	H	08
CS	LITERACY	LOLLIPOP DRAGON	SVE	359.00	AP	P	11
		COMPUTER LITERACY: INTRO.	CNTRL DATA	60.00	AP	M H	09
	PROGRAMMING	BASICS OF BASIC, THE	FOCUS	99.00	AP	M H	16
		ABC'S OF PROGRAMMING YOUR APPLE, THE	ABC	69.95	AP	M H	16
		SORTING TECHNIQUES I, II	MIC WRKSHP	24.95	AP	H	16
		COMPUTER SCIENCE I	MIC WRKSHP	24.95	AP	H	16
		EXPLORING SORTING ROUTINES	MECC	36.00	AP	H	14
		CREATURE CREATOR	DESIGNWARE	29.95	AP	P	14
		VOYAGE OF THE MIMI: INTRODUCTION TO COMPUTING	HOLT	122.25	AP	M	14
		BASIC PROGRAMMING	ORION	69.95	AP	M H	11
		PERSONAL GRAPHICS	LITTLE	14.50	AP	H	09
		PROGRAMMABLE CUBE, THE	METACOMET	34.95	AP	H	06
		DISCOVER BASIC	STER SWIFT	74.95	AP	M H	06
FL	FRENCH	SAVOIR ECRIRE	GESSLER	45.95	AP	E	13
		MOTS CROISES ET MOT SECRET	GESSLER	24.95	AP	H	13
		PLATO FRENCH SERIES	CNTRL DATA	39.95	AP	M H	13
		FRENCH VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	09
		LE VOCABULAIRE FRANCAIS	ISL SOFTWR	25.00	AP	M H	09
	GERMAN	PLATO GERMAN SERIES	CNTRL DATA	39.95	AP	M H	13
		POKER PARAT	GESSLER	39.95	AP	M H	13
		GERMAN VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	09
	GERMAN RUSSIAN	GERMAN/RUSSIAN HANGMAN, THE	GEO EARL	29.95	AP	H	09
	LATIN	FOREIGN LANGUAGE SERIES: LATIN	ISL SOFTWR	20.00	AP	M H	14
	MISC.	LINGUIST, THE	GESSLER	44.95	AP	M H	13
	SPANISH	SPANISH VOCABULARY GAME	INTEL SOFT	39.95	AP	M H	14
		POKER LISTO	GESSLER	39.95	AP	M H	14
		PLATO SPANISH SERIES	CNTRL DATA	39.95	AP	M H	13
		ANAGRAMAS HISPANOAMERICANOS	GESSLER	29.95	AP	M H	13
		LA CORRIDA DE TOROS	GESSLER	29.95	AP	M H	13
		SPANISH VOCABULARY BUILDER	CNTRL DATA	60.00	AP	M H	09
		SPANISH HANGMAN, THE	GEO EARL	29.95	AP	M H	04
HE	NUTRITION	YOU ARE WHAT YOU EAT	MARSHWARE	39.95	AP	M H	16
		FOOD GROUP PUZZLES	MARSHWARE	39.95	AP	P E M	16

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		FOOD FOR THOUGHT	MARSHWARE	39.95	AP	P E M	15
		NUTRITION-A BALANCED DIET	EME	35.00	AP	M H	L
		FOOD PROCESSOR, THE	ESHA	120.00	AP	M H	L
		NUTRITION TUTORIAL	EMC PUB	55.00	AP	M H	12
		NUTRITION SIMULATION	EMC PUB	49.95	AP	M H	12
		WHAT'S IN YOUR LUNCH	LAWR HALL	24.95	AP	M H	L
		EAT SMART	PILLSBURY	19.75	AP	E M H	L
		NUTRITION AND FOOD GROUPS	MECC	36.00	AP	M	L
HL SC	LIFE SCIENCE	HEALTH AWARENESS GAMES	HRM SOFTWR	99.00	AP	M H	L
IT	GRAPHICS	RAINBOW GRAPHICS	BLUE H	22.95	AP	M H	10
	SHELL	QUIZWHIZ	HARPER	29.95	AP	P E M H	16
		COUNTDOWN, TEST SIMULATOR, AUTHORING, MANAGEMENT SYSTEM	TYSON	49.95	AP	P E M H	16
		ALLIGATOR ALLEY	DLM	44.00	AP	P E M	12
		IDEA INVASION	DLM	44.00	AP	P E M	12
		WIZ WORKS	DLM	44.00	AP	P E M	12
		ALIEN ACTION	DLM	39.00	AP	E	11
		CREATE SKILLS: ELEM./INT.	HARTLEY	26.95	AP	E	05
		CREATE FILL-IN-THE-BLANKS	HARTLEY	26.95	AP	E	05
	STUDENT RECORDS	SPORTS STATS	TIES	59.95	AP	M H	09
		EASY GRADER	API	22.95	AT	E M H	05
	TESTING	TEST BANK	ADV TECH	450.00	RS	E M H	05
LA	ALPHABETIZING	ALPHABET HARVEY	INTEL SOFT	39.95	AP	P E M	15
	GRAMMAR	VERBS: ACTION/LINKING VERBS	INTEL SOFT	29.95	AP	E M	15
		SUBJECT-VERB AGREEMENT	MIC WRKSHP	49.95	AP	M H	16
		GRAMMAR EXAMINER, THE	DESIGNWARE	44.95	AP	E M H	15
		LANGUAGE ARTS: PARTS OF SPEECH	HOUGHTON	225.00	AP	P E M	15
		PRACTICAL GRAMMAR PART I: PRINCIPAL PARTS OF VERBS	INTEL SOFT	34.95	AP	H	13
		PRACTICAL GRAMMAR: COMPLEX SENTENCES - ADJECTIVE CLAUSES	INTEL SOFT	34.95	AP	H	13
		BASIC ENGLISH SKILLS: SENTENCE	BRITANNICA	349.00	AP	E M	11
		ELECTRIC ENGLISH	TIES	150.00	AP	M	11
		PUNCTUATION SKILLS: COMMAS	MILT BRAD	44.95	AP	E M	10
		PUNCTUATION SKILLS: END MARKS	MILT BRAD	44.95	AP	E M	10
		CAPITALIZATION PLUS	MIC WRKSHP	39.95	AP	E M H	11
		VERB VIPER	DLM	44.00	AP	E	09
		SENTENCES	MICRO P&L	24.95	AP	M H	04
		GRAMMAR PROBLEMS FOR PRCT.-HOM	MILLIKEN	80.00	AP	E M	04
		GRAMMAR PACKAGE I	MICRO LRN	24.95	RS	E	04
		ROOTS/AFFIXES	HARTLEY	39.95	AP	E M	05
		NOUNS/PRONOUNS	HARTLEY	32.95	AP	E	05
		VERBS	HARTLEY	32.95	AP	E	05
		SENTENCE DIAGRAMMING	AVANT GARD	24.95	AP	M H	04
		BASIC ENGLISH SKILLS	BRITANNICA	373.00	AP	M H	05
		VOWELS	HARTLEY	93.95	AP	E	06
		RIDDLE ME THIS	DATA COMM	85.25	AP	E M	08
	LITERATURE	GREEK MYTHOLOGY	TYC	39.95	AP	M H	14

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
	MISC.	ENGLISH SAT II	MICRO LAB	35.00	AP	H	14
		VOCABULARY I, PLURALS, SENT.	COLORADO	75.00	AP	E M	10
		ENGLISH, VOLUME 1	MECC	39.00	AP	M	08
	PROBLEM SOLVING	PLAY ON WORDS	INTEL SOFT	29.95	AP	E	15
	READING	RELEVANT READING THROUGH SCIENCE I, II, III AND IV	AQUARIUS	29.95	AP	P E M	16
		HOLT READING SKILLS EXTENDER 3	HOLT	249.00	AP	P	16
		SOLAR READING: FLIGHT 1 - CENTRAL THOUGHT	LRN MICSYS	60.00	AP	P E	16
		PAVE - PERCEPTUAL ACCURACY/ VISUAL EFFICIENCY TRAINING	INST/COMM	80.00	AP	P E M H	16
		FAY'S WORD RALLY	DIDATECH	49.95	AP	P E	15
		MYTHS, MAGIC AND MONSTERS	MICRO LAB	35.00	IB	E M	15
		SUPERMIND	ED'L ACTV	69.00	AP	E M	15
		CONTENT AREA READING: LIT	GAMCO	39.95	AP	E M H	15
		BEGINNING CONSONANTS AND ENDING CONSONANTS	COMP ED	21.95	AP	P	14
		READING ADVENTURE I	INTEL SOFT	39.95	AP	P	13
		READING KLOOZ	MIDWEST PC	39.95	AP	M	14
		DIASCRIPTIVE READING I	ED'L ACTV	295.00	AP	E	11
		REEF OF GOLD, THE	BRITANNICA	49.00	AP	E	11
		PROCESSING POWER PROGRAM	INST/COMM	180.00	AP	E	11
		CLOZE-PLUS, LEVEL H	INST/COMM	150.00	AP	M	11
		CLOZE PLUS (CONTEXT ANALYSIS)	INST/COMM	150.00	AP	P	09
		WORD RADAR	DLM	44.00	AP	P	10
		PIK-PEK-PUT	DATA COMM	227.50	AP	E M	09
		TANK TACTICS	DATA COMM	197.50	AP	E M H	09
		BIG DOOR DEAL	DATA COMM	113.75	AP	M H	09
		COMPREHENSION POWER PROGRAM	INST/COMM	425.00	AP	E M H	04
		CONSONANTS/BLENDS	HARTLEY	79.95	AP	P	05
		SPEED READER	DAVIDSON	70.00	AP	M H	05
		WORD FAMILIES	HARTLEY	29.95	AP	P	05
		PHONET	TIES	49.95	AP	E	06
		OUR WEIRD & WACKY WORLD: RDG	ED'L ACTV	39.95	AP	E	06
		OUR WEIRD & WACKY WORLD: COMP	ED'L ACTV	39.95	AP	E	06
		READING ROUNDUP	SCOTT FORS		TI	E	07
		READING FLIGHT	SCOTT FORS	54.95	TI	E	07
		CARIS	BRITANNICA	74.00	AP	P	07
		READING RALLY	SCOTT FORS	54.95	TI	E	07
		WHO, WHAT, WHERE, WHEN	HARTLEY	35.95	AP	E	06
		WESTING GAME, THE	SUNBURST	25.00	AP	M	08
		WORD MEMORY PROGRAM	INST/COMM	65.00	AP	P	08
		RHYMES AND RIDDLES	SPINNAKER	29.95	AP	P	08
		DIASCRIPTIVE READING	ED'L ACTV	365.00	AP	E M	08
		BRIDGE TO TERABITHIA	SUNBURST	25.00	AP	M	08
		CALL OF THE WILD	A/V CONC	189.00	AP	E M	08
		ALPINE SKIER	DATA COMM	118.75	AP	M	08
		TENNIS ANYONE?	DATA COMM	170.75	AP	E M	08

#	SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		SPELLING	STICKYBEAR SPELLGRABBER	WEEK READ	39.95	AP	P E	16
			CRYPTO CUBE	DESIGNWARE	39.95	AP	P E M H	15
			SPELLAKAZAM	DESIGNWARE	29.95	AP	P E	15
			SPELLICOPTER	DESIGNWARE	39.95	AP	P E	15
			SPELLAGRAPH	DESIGNWARE	39.95	AP	P E	14
			SPELLING WORKSHEET GENERATOR	STER SWIFT	49.95	AP	E M H	14
			SCHOLASTIC SPELLING	SCHOLASTIC	69.95	TI	E	11
			SPELLING WIZ	DLM	44.00	AP	E	10
			SPECIAL NEEDS VOLUME 1: SPLLNG	MECC	44.00	AP	E	09
			CREATE SPELL-IT	HARTLEY	26.95	AP	E M	05
			MAGIC SPELLS	TLC	45.00	AP	E M	05
			SPELLING STRATEGY	BEHV ENGIN	45.00	AP	E M	05
			SIMS	TIES	49.95	AP	E	06
			MULTIPLE SKILLS	HARTLEY	92.95	AP	P	06
			WORD GAMES	MECC	37.00	AT	E	07
		VOCABULARY	WORD BENDERS - PHRASES, A1	MIDWEST PC	39.95	AP	M H	14
			WORDFINDER	HOLT	34.95	CO	M H	14
			VOCABULARY ADVENTURE I	INTEL SOFT	59.95	AP	E	13
			WORD BENDERS-SIMILARITIES, C-1	MIDWEST PC	39.95	AP	M H	14
			SHIP AHOY/WORD SCRAMBLE	COMP SKILL	39.95	AP	E M H	12
			PICNIC	COMP SKILL	39.95	AP	E M H	12
			FOUR-LETTER WORDS	CONDUIT	50.00	AP	M H	12
			KEY LINGO	READ DIG	39.95	AP	M H	11
			CHAMBERS OF VOCAB	READ DIG	39.95	AP	E M H	10
			ANTONYM GAME, THE	J & S	29.95	AP	H	10
			WORDMAN	DLM	44.00	AP	E	09
			WORD INVASION	DLM	44.00	AP	E M	09
			WORDWATCH	INST SOFT	14.95	RS	M	04
			HOMONYMS IN CONTEXT	RANDOM	60.00	AP	E M	04
			ANTONYMS/SYNONYMS	HARTLEY	39.95	AP	E M	05
			WORD SEARCH	HARTLEY	26.95	AP	E	05
			VOCABULARY DOLCH	HARTLEY	39.95	AP	P	05
			CREATE VOCABULARY	HARTLEY	26.95	AP	E M	06
			WORDWRIGHT	BRITANNICA	299.00	AP	E M H	07
			EARL'S WORD POWER	GEO EARL	29.95	AP	E M H	07
			VOCABULARY SKILLS: PREF,SUF,RT	MILT BRAD	44.95	AP	M	08
			VOCABULARY SKILLS: CONTEXT CLU	MILT BRAD	44.95	AP	M	08
			WORD MASTER	DLM	44.00	AP	M	08
		WRITING	WRITING WORKSHOP, THE	MILLIKEN	195.00	AP	P E M H	16
			STORY TREE	SCHOLASTIC	59.95	AP	E M H	16
			BANK STREET STORYBOOK	MINDSCAPE	49.95	AP	E M	14
			BEGINNING COMPOSITION	BEHV ENGIN	34.95	AP	M H	12
			THAT'S MY STORY	LEARN WELL	59.95	AP	E M H	12
			COMPOSITION STRATEGY	BEHV ENGIN	39.95	AP	M H	12
			GREETING CARDS	COMP SKILL	39.95	AP	E M H	11
			ADVERTISING TECHNIQUES	MICRO P&L	24.95	AP	M H	09
			GRAMMAR AND WRITING	BRITANNICA	229.00	AP	E	09
			ENGLISH COMPUTORIALS	EDUCULTURE	625.00	AP	H	04
			STORY MACHINE	SPINNAKER	39.95	AP	P	08
	MA	ALGEBRA	PROBLEM SOLVING IN ALGEBRA	BRITANNICA	329.00	AP	H	16
			ALGEBRA SERIES	MIC WRKSHP	24.95	AP	M H	15
			MORE POWERS TO YOU!	MICRO LAB	35.00	AP	M H	15
			PRACTICAL ALGEBRA: ALGEBRA	INTEL SOFT	49.95	AP	H	14

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		WORD PROBLEMS					
		SPECIAL TOPICS IN MATHEMATICS: BASES OTHER THAN TEN	INTEL SOFT	29.95	AP	M H	14
		MISSION: ALGEBRA	DESIGNWARE	44.95	AP	H	13
		ALGEBRA ARCADE	WADSWORTH	49.95	AP	M H	12
		ELECTRONIC STUDY GUIDE - SYSTEM OF EQUATIONS/INEQUALS	WADSWORTH	49.95	AP	M H	12
		ELECTRONIC BLACKBOARD SERIES: ALGEBRA	WADSWORTH	95.00	AP	M H	12
		INTRODUCTORY ALGEBRA	AVANT GARD	29.95	AP	M H	11
		SPECIAL PRODUCTS & ALG. FACTOR	AVANT GARD	29.95	AP	H	11
		ALGEBRA DRILL AND PRACTICE II	CONDUIT	125.00	AP	M H	11
		GRAPHING EQUATIONS	CONDUIT	60.00	AP	H	10
		ELECTRONIC BLACKBOARD: TRIG.	WADSWORTH	75.00	AP	H	10
		ELECTRONIC BLACKBOARD: FUNCT.	WADSWORTH	50.00	AP	H	10
		ELECTRONIC STUDY GUIDE: D-I	WADSWORTH	49.95	AP	H	10
		ELECTRONIC STUDY GUIDE: D-II	WADSWORTH	49.95	AP	H	10
		ELECTRONIC STUDY GUIDE: D-III	WADSWORTH	49.95	AP	H	10
		ELECTRONIC STUDY GUIDE: D-IV	WADSWORTH	49.95	AP	H	10
		ELECTRONIC STUDY GUIDE: D-V	WADSWORTH	49.95	AP	H	10
		MORE ALGEBRA: SLOPE	TYCOM	19.95	PET	H	04
		APPLE‡SURFACE	CONDUIT	40.00	AP	H	04
		MORE ALGEBRA: COMP	TYCOM	19.95	PET	H	04
		MORE ALGEBRA: DISC	TYCOM	19.95	PET	H	04
		MORE ALGEBRA: QUAD	TYCOM	19.95	PET	H	04
		MORE ALGEBRA: SIMUL	TYCOM	19.95	PET	H	04
		INSTRUCTIONAL COMPUTING: ALG-2	PINELLAS	5.00	AP	H	04
		LESSONS IN ALGEBRA	GEO EARL	29.95	AP	M	06
		COMPUTER GRAPHING EXPERIMENTS	ADD-WESLEY	141.00	AP	H	06
	ARITHMETIC	MAGIC CASH REGISTER, THE	AVANT GARD	34.95	AP	P E	16
		MICROCOURSE MATHEMATICS: SOLVING STORY PROBLEMS:WN 3-6	HOUGHTON	524.95	AP	P E	16
		GUIDEMASTER - BORROWING: REGROUPING FOR SUBTRACTION	RENAISSANCE	45.00	AP	P E	16
		MATH POWER PROGRAM: WHOLE NO.	INST/COMM	160.00	AP	P E	16
		ARITH-MAGIC II	QED	35.00	AP	E M H	16
		PROPORTIONS AND PER CENTS	QED	199.00	AP	E M H	16
		SHARK ATTACK! - MATH SERIES	MIDWEST PC	39.95	AP	P E M	16
		LEARN ABOUT NUMBERS	C & C SOFT	40.00	AP	P	14
		ADDITION CIRCUS	GAMCO	39.95	AP	P	15
		DECIMALS: MULT. AND DIVISION	GAMCO	39.95	AP	E M	15
		MATHEMATICS ACTIVITIES CRSWR-4	HOUGHTON	150.00	AP	E	15
		MATHEMATICS - GRADE 3	INTEL SOFT	79.95	AP	P	15
		MATH MAZE	DESIGNWARE	39.95	AP	P E	15
		MATHSHEET	HOUGHTON	99.00	AP	P E M	15
		MATHEMATICS LIFE SKILLS,	COMP AGE	29.95	AP	M H	14

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		VOLUME 1: MONEY MANAGER					
		ADDITION AND SUBTRACTION	GAMCO	39.95	AP	E	14
		FAY: THAT MATH WOMAN	DIDATECH	29.95	AP	P	14
		PURCHASE POWER	COMP AGE	29.95	AP	M H	14
		RATIO AND PROPORTION	ED'L ACTV	59.95	AP	M H	13
		BUZZ, BANG, HARVEY	INTEL SOFT	29.95	AP	E	14
		FRACTION FUN WITH FRACTION MAN	EDULINK	39.95	AP	E	15
		ADDITION AND SUBTRACTION, 6-10	COMP ED	21.95	AP	P	14
		ANDY AND THE MATH-A-SIZER	ALADDIN	29.95	RS	E	14
		MATHEMATICS WORD PROBLEMS - GRADE 1	INTEL SOFT	24.95	AP	P	14
		ADDITION LOGICIAN	MECC	43.00	AP	P	13
		NUMBER FARM	DLM	29.95	AP	P	13
		BUDGETING TUTORIAL	EMC PUB	55.00	AP	M H	12
		BUDGETING SIMULATION	EMC PUB	55.00	AP	M H	12
		STAR MAZE	SCOTT FORS	39.95	TI	E	12
		PYRAMID PUZZLER	SCOTT FORS	39.95	TI	E	12
		NUMERATION 2	SCOTT FORS	39.95	TI	E	12
		NUMERATION 1	SCOTT FORS	39.95	TI	P E	12
		NUMBER BOWLING/SPACE JOURNEY	SCOTT FORS	39.95	TI	E M	12
		MATHEMATICS LIFE SKILLS, VOL 2 WORLD OF WORK	COMP AGE	29.95	AP	M H	12
		SPEED/BINGO MATH	COMMODORE	19.95	CO	E M	11
		MATHFISH	SONIUS	12.95	CO	E	11
		MATH 1-2-3 FOUR PACK: COUNTING	MICROED	34.95	CO	P	11
		EARLY GAMES: PIECE OF CAKE	SPRINGBD	29.95	AP	E M	11
		EARLY GAMES: FRACTION FACTORY	SPRINGBD	29.95	AP	E M	11
		BASIC NUMBER FACTS	CNTRL DATA	49.95	AP	E	11
		SUBTRACTING MIXED FRACTIONS	MIC WRKSHP	24.95	AP	E M	10
		COMPU-MATH: FRACTIONS	EDU-WARE	49.00	AP	M H	10
		DIVISION SKILLS	MILT BRAD	44.95	AP	E M	10
		MATHWIZ	MERRITT	100.00	CO	E M	10
		DECIMALS	QED	120.00	AP	E M	10
		MONEY MANAGER, THE	STER SWIFT	80.00	AP	M	10
		WHOLE NUMBERS PRACTICE	CNTRL DATA	60.00	AP	E M	09
		COMPUTER MATH ACTIVITIES, V-5	ADD-WESLEY	56.00	AP	E M	09
		DECIMALS PRACTICE	CNTRL DATA	60.00	AP	E M	09
		FRACTIONS PRACTICE	CNTRL DATA	60.00	AP	E M	09
		MINUS MISSION	DLM	39.00	AP	E M	04
		ESSENTIAL MATH PROGRAM	RADIO SHAK	199.00	RS	M H	04
		FUNDAMENTAL MATH I, II, III	RANDOM	699.00	RS	E M	04
		ELEMENTARY MATHEMATICS CLASS-ROOM LEARNING SYST.: WHOLE NO.	STER SWIFT	495.00	AP	M	04
		NUMBER BLAST	API	15.95	AT	E M	04
		ALLIGATOR MIX	DLM	39.00	AP	E M	04
		MATH CONCEPTS	HARTLEY	39.95	AP	E	05
		MATH STRATEGY	BEHV ENGIN	45.00	AP	E M	05
		MATH FACTS/NUMBER & MATH MSTRY	COLORADO	75.00	AP	E	06

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		MATH SKILLS: ELEMENTARY	BRITANNICA	74.00	AP	E	06
		NUMBER WORDS, LEVEL 2	HARTLEY	29.95	AP	E	06
		ARITHMETIC CLASSROOM, THE:FRAC	STER SWIFT	49.95	AP	E M	05
		ARITHMETIC CLASSROOM, THE:DEC	STER SWIFT	49.95	AP	E M	05
		ELEMENTARY MATH	MECC	49.95	AP	E M	07
		MATH SKILLS: JUNIOR HIGH	BRITANNICA	74.00	AP	M	07
		DIVISION 1	SCOTT FORS	39.95	TI	E	07
		ARITH-MAGIC	QED	35.00	AP	E M	07
		COMPUTER MATH ACTIVITIES, V-4	ADD-WESLEY	56.00	AP	E M	07
		COMPUTER MATH GAMES	ADD-WESLEY	324.00	AP	E M	06
		PRESCRIPTIVE MATH DRILL	HARTLEY	79.95	AP	E M	06
		EXPANDED NOTATION	HARTLEY	29.95	AP	E	06
		NUMBER WORDS, LEVEL 1	HARTLEY	26.95	AP	E	06
		MATHEMATICS ASSMT/PRESC 5-7	READ DIG	129.00	AP	E M	08
		TEASERS BY TOBBS	SUNBURST	35.00	AP	E M	08
		COMPUTER MATH ACTIVITIES, V-3	ADD-WESLEY	56.00	AP	E M	07
		MIXED NUMBERS	MILT BRAD	44.95	AP	E M	07
		DRAGON MIX	DLM	39.00	AP	E M	07
		COMPUTER MATH ACTIVITIES, V-1	ADD-WESLEY	56.00	AP	E M	07
		COMPUTER MATH ACTIVITIES, V-2	ADD-WESLEY	56.00	AP	E M	07
		DECIMAL SKILLS	MILT BRAD	44.95	AP	E M	08
	CALCULUS	ARBPLOT	CONDUIT	125.00	AP	H	10
	GEOMETRY	TRAP-A-ZOID	DESIGNWARE	39.95	AP	E M H	13
		PRACTICAL GEOMETRY SERIES: TRIANGLES	INTEL SOFT	65.00	AP	H	14
		GEOART	VENTURA	39.95	AP	E M H	13
		LOGIC AND EUCLIDEAN GEOMETRY	AVANT GARD	29.95	AP	H	11
		EUCLID GEOMETRY TUTOR	RADIO SHAK	29.95	RS	H	04
	GRAPHING	GRAPHS AND CHARTS	MICROED	34.95	CO	E M	L
		EXPLORING TABLES AND GRAPHS	WEEK READ	34.95	AP	E	13
		INTERPRETING GRAPHS	CONDUIT	45.00	AP	M H	L
	MEASUREMENT	HOW TO WEIGH AN ELEPHANT	LEARN TECH	29.95	AP	P	16
		METRIC I TO V	CLASRM CON	225.00	IB	M H	L
		EXPLORER METROS: A METRIC ADV	SUNBURST	55.00	AP	E M	L
		APPROX., ESTIM. & STNDRD FORM	SCOTT FORS	59.95	AP	M H	L
		SCALES	SCOTT FORS	59.95	AP	M H	L
		METRIC DRILL	HARTLEY	49.95	AP	E M	05
	MISC.	MATH WORLDS: EXPLORING MATH WITH COMPUTERS	DC HEATH	249.00	AP	E M H	16
	PROBLEM SOLVING	WORDMATH	MILLIKEN	195.00	AP	E M	16
		MATHEMATICS ACTIVITIES CRSWR-7	HOUGHTON	165.00	AP	M	15
		SPORTS PROBLEMS III	INTEL SOFT	39.95	AP	H	14
		COMP-U-SOLVE	ED'L ACTV	109.00	AP	M H	L
		SEM CALC: WORD PROBLEM SOLVER	SUNBURST	95.00	RS	M H	L
		KING'S RULE, THE	SUNBURST	55.00	AP	P E M H	L
		PROBLEM SOLVING STRATEGIES	MECC	48.00	AP	E M	L
		READ AND SOLVE MATH PROBLEMS	ED'L ACTV	98.00	AP	E	08
	TELLING TIME	CLOCK	HARTLEY	39.95	AP	P	06
	TRIGONOMETRY	ELECTRONIC STUDY GUIDE FOR TRIGONOMETRY	WADSWORTH	49.95	AP	H	13

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
MA LA	MISC.	BASIC SKILLS COURSEWARE: GRD 5	LANG-FORD	325.00	AP	E	14
		BASIC SKILLS COURSEWARE: GRD 3	LANG-FORD	325.00	AP	P	14
		BASIC SKILLS COURSEWARE: GRD 9	LANG-FORD	325.00	AP	H	14
		KRELL'S COLLEGE BOARD SAT	KRELL	249.95	AP	H	07
MA SC	ARITHMETIC	MATHEMATICS FOR SCIENCE SERIES I AND II	MERLAN	62.00	CO	E M H	L
MISC.	MISC.	QUIZAGON	SPRINGBD	39.95	AP	H	11
MU	MUSIC	EARLY GAMES: MUSIC	SPRINGBD	29.95	AP	E	11
		KEYBOARD ORGAN	API	22.95	AT	M H	05
PE	ATHLETICS	50 DEFENSE VS RUN	STER SWIFT	99.95	AP	M H	12
PR	READINESS	LETTERS AND FIRST WORDS	C & C SOFT	50.00	AP	P	14
		EARLY LEARNING SERIES: VOL. 1	ED COMPR	99.95	AP	P	14
		PRESCHOOL ACTIVITIES FOR LEARNING	ED'L ACTV	65.00	AP	P	14
		FLOPPY TEACHES WHAT IS MISSING	FLOPPY	29.95	AP	P	11
		STICKYBEAR ABC	WEEK READ	39.95	AP	P	11
		EARLY GAMES: MATCHMAKER	SPRINGBD	29.95	AP	P	11
		EARLY GAMES FOR YOUNG CHILDREN	SPRINGBD	29.95	AP	P	11
		SAME AND DIFFERENT	FLOPPY	29.95	AP	P	11
		STICKYBEAR NUMBERS	WEEK READ	39.95	AP	P	09
		MY FIRST ALPHABET	ATARI	34.95	AT	P	04
		LETTER RECOGNITION	HARTLEY	26.95	AP	P	05
		JUGGLES' RAINBOW	TLC		AP	P	06
		FACEMAKER	SPINNAKER	34.95	AP	P	08
		FLOPPY TEACHES HOW TO PRINT	FLOPPY	34.95	AP	P	08
PS	LOGIC	SCRAMBLE EGGS	LEARN TECH	24.95	CO	P E M	16
		MIND BENDERS, A1, A2, AND A3	MIDWEST PC	39.95	AP	M H	14
		MIND BENDERS, A3	MIDWEST PC	49.95	AP	E M H	09
		MIND BENDERS, B1	MIDWEST PC	49.95	AP	E M H	09
	PROBLEM SOLVING	WHAT'S MY LOGIC?	MIDWEST PC	39.95	AP	P E M H	16
		BRAIN BOOSTER	TRILLIUM	29.95	AP	P E M H	16
		ROBOT ODYSSEY I	TLC	49.95	AP	M H	L
		ROCKY'S BOOTS	TLC	49.95	AP	E M H	L
		FUN HOUSE MAZE	SUNBURST	55.00	AP	E M	L
		IN SEARCH OF MOST AMAZING THNG	SPINNAKER	40.00	AT	M H	L
		FACTORY, THE	SUNBURST	49.00	AT	E M H	L
		CHESS	ODESTA	69.96	AP	E M H	06
		ODIN	ODESTA	49.95	AP	E M H	06
		CHECKERS	ODESTA	49.95	AP	E M H	06
		BUMBLE PLOT	TLC	39.95	AP	E M	07
		MOPTOWN	TLC	50.00	AP	E M	07
		BUMBLE GAMES	TLC	39.95	AP	E	07
SC	ASTRONOMY	SKY TRAVEL: A WINDOW TO OUR GALAXY	COMMODORE		CO	M H	L
		STAR SEARCH	EARTHWARE		AP	M H	L
		OBSERVATORY, THE	LIGHTSPEED	62.50	AP	H	13
		STELLAR ASTRONOMY	CROSS	30.00	AP	M H	L

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		TELLSTAR	SCHARF SFT	39.95	AP	M H	12
		VISIBLE SOLAR SYSTEM	COMMODORE	29.95	CO	E M	L
		ASTRONOMY: STARS FOR ALL SEASO	ED'L ACTV	59.00	AP	E M H	L
	BIOLOGY	INTERNAL JOURNEY	WALT DISNY	59.95	AP	M H	16
		OPERATION FROG	SCHOLASTIC	59.95	AP	E M H	16
		BIOLOGY CHALLENGE	ISL SOFTWR	29.95	AP	H	16
		MODERN BIOLOGY STUDY DISK	HOLT	99.00	AP	M H	14
		OSMOTIC PRESSURE	CONDUIT	50.00	AP	H	13
		COMPUTER BIOLOGY LAB: FROG	CROSS	30.00	AP	M H	L
		PROTOZOA	VENTURA	39.95	AP	M H	L
		WORM, THE	VENTURA	39.95	AP	M H	L
		VISIFROG	VENTURA	39.95	AP	M H	L
		PASSIVE TRANSPORT	CLASRM CON	69.95	IB	M H	L
		PHOTOSYNTHESIS LIGHT ENERGY	CLASRM CON	69.95	IB	M H	L
		MICRO GARDENER, THE	ED'L ACTV	59.00	AP	E M	L
		CLASSIFICATION OF LIVING THNGS	ED'L ACTV	59.00	AP	M H	L
		HEREDITY DOG	HRM SOFTWR	49.00	AP	H	L
		CELL GROWTH AND MITOSIS	CLASRM CON	69.95	IB	M H	L
		PLANT GROWTH	CLASRM CON	69.95	IB	M H	L
		LEAF: STRUCTURE & FUNCTION	CLASRM CON	69.95	IB	M H	L
		CLASSIFY	DIV ED ENT	70.00	AP	H	11
		GENETICS	TIES	49.95	AP	E M	L
		BIOLOGY: ENERGY AND LIFE	BRITANNICA	133.00	AP	H	10
		BIOLOGY: THE CELL	BRITANNICA	125.00	AP	H	09
		EVOLUT	CONDUIT	30.00	AP	H	04
	CHEMISTRY	MODELER: MOLECULAR DESIGN ED.	COMPRESS	75.00	AP	H	16
		CHEMAID	VENTURA	39.95	AP	M H	L
		PHYSICAL SCI BASEBALL-CHMSTRY	J & S	29.50	AP	M H	L
		CHEMICAL ELEMENT GAME	SCOTT FORS	59.95	AP	E M	L
		INTROD. TO GENERAL CHEMISTRY	COMPRESS	470.00	AP	M H	L
		MILLIKAN	MENTOR	19.95	AP	H	04
		TITRATION	MENTOR	19.95	AP	H	04
		CHEMISTRY: ACIDS AND BASES	BRITANNICA	74.00	AP	H	07
	EARTH SCIENCE	GALACTIC PROSPECTOR	WALT DISNY	59.95	AP	M H	16
		EARTH SCIENCE SERIES: HYDROLOGIC CYCLE	IBM	49.00	IB	H	16
		EARTH SCIENCE SERIES: GROUND WATER	IBM	49.00	IB	M H	16
		EARTH SCIENCE SERIES: SURFACE WATER	IBM	49.00	IB	H	16
		EARTH SCIENCE SERIES: MOISTURE IN THE ATMOSPHERE	IBM	49.00	IB	H	16
		WEATHER FACTORS	MICROED	34.95	CO	E M H	L
		VOYAGE OF THE MIMI, THE: MAPS AND NAVAGATION	HOLT	122.25	AP	E M	L
		HAWS: HOME AUTOMATIC WEATHER STATION	VAISALA	199.95	CO	M H	L

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		SKIES ABOVE, THE/THE WATERS BELOW	AQUARIUS	115.00	AP	E M H	L
		GEOLOGY SEARCH	MCGRAW HIL	180.00	AP	E M	L
		EARTH SCIENCE SERIES	TYC	68.50	RS	M H	L
		WEATHER COMMAND:A SCIENCE GAME	ED AUDIO	40.00	AP	E M H	L
		WEATHER	SCOTT FORS	59.95	AP	M H	L
		TIME & SEASONS	RAND MCNLY	111.00	AP	M H	L
		EARTH SCIENCE	MECC	46.00	AT	E M	L
		CLIMATE	SCOTT FORS	59.95	AP	M H	L
	ENVIRONMENT	VOYAGE OF THE MINI, THE: ECOSYSTEMS	HOLT	122.25	AP	E M	16
		4-H DING DARLING PROJECT	HEARTLAND	30.00	AP	E M	16
		ACID RAIN	DIV ED ENT	60.00	AP	E M H	L
		NICHE: AN ECOLOGICAL GAME/SIMULATION	DIV ED ENT	70.00	AP	M H	L
		BIOMES AND FOOD WEBS	YAKER	39.00	AP	M H	L
		LIMITING FACTORS AND CARRYING CAPACITY	YAKER	39.00	AP	M H	L
		HOME ENERGY CONSERVATION	EME	55.00	AP	M H	L
		WATER POLLUTION	EME	29.50	AP	M H	L
		ENERGY SEARCH	MCGRAW HIL	180.00	AP	E M H	L
		ENERGY HOUSE	TIES	49.95	AP	E M	L
		AIR POLLUTION	EME	37.00	AP	M H	L
		OH, DEER!	MECC	44.00	AP	M	L
		POND ECOLOGY	SCOTT FORS	59.95	AP	E M	L
		POWER GRID	HRM SOFTWR	59.00	AP	M H	L
		PERSONAL ENERGY INVENTORY	HRM SOFTWR	39.00	AP	M H	L
		HOME ENERGY SAVINGS	HRM SOFTWR	35.00	AP	M H	L
		POLLUTE/A SIM OF WATER POLLUT	DIV ED ENT	70.00	AP	H	L
		ENERGY CZAR	ATARI	14.95	AT	M H	04
	GENERAL SCIENCE	SECRETS OF SCIENCE ISLAND	GROLIER	39.95	AP	P E M H	16
		SCIENCE TRIVIA CHALLENGE	SPECTRUM	16.00	AP	P E M	16
	LIFE SCIENCE	T. REX	HOLT	49.95	AP	M H	14
		DINOSAUR DAYS	TYC	39.95	AP	E	14
		BODY SYSTEMS	MICROED	34.95	CO	E M	L
		YOUR BODY - SERIES I & II	FOCUS	119.00	AP	E M H	L
		HEART SIMULATOR, THE	FOCUS	49.00	AP	E M H	L
	MISC.	SCIENCE CHALLENGES	MICROED	34.95	CO	E M	L
	PHYSICAL SCIENCE	PHYSICAL SCIENCE DATABASES FOR PFS:FILE	SCHOLASTIC	99.95	AP	M H	16
		PHYSICAL SCI PROG/BONDING	J & S	29.00	AP	M	L
		PHYSICAL SCI PROG/RADIOACTIVIT	J & S	29.00	AP	M	L
		PHYSICAL SCIENCE SERIES	MICROPHYS	250.00	CO	M	L
	PHYSICS	CHARGED PARTICLES II	VERNIER	24.95	AP	M H	12
		MATTER AND ENERGY	FOCUS	159.00	AP	M H	L
		ENERGY SERIES	FOCUS	69.00	AP	M H	L

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		ENERGY AND POWER	MICROED	34.95	CO	E M H	L
		SIMPLE MACHINES	MICROED	34.95	CO	E M H	L
		LAWS OF MOTION	EME	93.50	AP	M H	L
		PROJECTILES II	VERNIER	24.95	AP	M H	12
		ORBIT II	VERNIER	24.95	AP	M H	12
		KINEMATICS II	VERNIER	24.95	AP	M H	12
		CIRCUIT LAB	APX	24.95	AT	M H	12
		WAVE ADDITION II	VERNIER	24.95	AP	H	12
		VECTOR ADDITION II	VERNIER	24.95	AP	M H	12
		PHYSICS GEMS, VOLUME 12	CROSS	35.00	AP	M H	L
		VECTORS AND GRAPHING, VOL. 1	CROSS	15.00	AP	H	11
		LOGIC GATES	TIES	40.00	AP	H	11
		PHYSICS: ELEMENTARY MECHANICS	CNTRL DATA	70.00	AP	H	09
		NEWTON	CONDUIT	35.00	AP	H	04
		COMPUTER SIMULATED PHYSICS EXP	EDUTECH	85.00	AP	H	04
		ATOM, THE	MICROED	14.95	AP	M	06
		THREE MILE ISLAND	MUSE	39.95	AP	H	06
	PROCESS	GRAPHICAL ANALYSIS II	VERNIER	24.95	AP	H	16
		VOYAGE OF THE MIMI, THE: BANK STREET LABORATORY	HOLT	302.25	AP	E M H	16
		DISCOVER: A SCIENCE EXPERIMENT	SUNBURST	55.00	AP	E M H	16
		CONNECTIONS	KRELL	99.95	AP	M H	L
		PLATO'S CAVE	KRELL	49.95	AP	M H	L
		THINK LIKE A SCIENTIST	MICRO LAB	35.00	AP	E M H	L
		DISCOVERING THE SCIENTIFIC METHOD	FOCUS	49.00	AP	E M H	L
		DISCOVERY LAB	MECC	44.00	AP	E M H	L
		CLASSIFICATION	MECC	36.00	AP	E M H	L
		TRIBBLES	CONDUIT	40.00	AP	M H	12
		BAFFLES	CONDUIT	50.00	AP	M	L
		CAUSE AND EFFECT	MARSHWARE	39.95	AP	E M	L
		SCIENTIFIC METHOD, THE	CYGNUS	39.00	AP	M H	L
		EXPER. IN HUMAN PHYSIOLOGY	HRM SOFTWR	249.00	AP	M H	L
		ATARILAB	ATARI	99.00	AT	E M	L
		EXPERIMENTS IN SCIENCE	HRM SOFTWR	249.00	AP	M H	L
		INCREDIBLE LABORATORY, THE	SUNBURST	55.00	AT	E M	L
		CHARACTERISTICS OF A SCIENTIST	CYGNUS	39.00	AP	M H	L
		TEMPERATURE GRAPHER	HRM SOFTWR	75.00	AP	M H	L
		MODELING	MECC	36.00	AP	M	L
		PRECISION TIMER	VERNIER	39.95	AP	H	07
SS	ECONOMICS	COSMIC CARNIVAL	WALT DISNY	59.95	AP	M H	16
		LEMONADE	APX		AT	E M	05
		MARKET PLACE, THE	MECC	36.00	AT	E M	07
		DECISION SHOP, THE	CHDNS MSM		AP	E M	07
		CARTELS AND CUTTHROATS	STRAT SIMS	39.95	AP	H	08
	GEOGRAPHY	HOMETOWN	ACTIVE LRN	148.00	AP	E M H	16
		STATES & TRAITS	DESIGNWARE	44.95	AP	P E M H	16
		STATES	VENTURA	39.95	AP	E M	15
		STATES AND CAPITALS	GAMCO	39.95	AP	E M H	15
		U.S. GEOGRAPHY QUIZ	INTEL SOFT	29.95	AP	M H	13

SUB	TOPIC	TITLE	PRODUCER	PRICE	HRD	LEVEL	SET
		GEOGRAPHY SERIES: NEW ENGLAND	INTEL SOFT	29.95	AP	M	13
		MEDALIST, THE - STATES	HARTLEY	39.95	AP	E M	11
		EXPLORING AMERICA SERIES, THE	AQUARIUS	169.00	AP	M H	09
		GEOGRAPHY	MECC	37.00	AT	E M	07
		MAP READING	MICRO P&L	19.95	AP	E M	08
	GOVERNMENT	HOW A BILL BECOMES A LAW	INTEL SOFT	59.95	AP	M H	16
		POLITICAL GENIE	BORING	54.95	IB	M H	15
		U.S. CONSTITUTION TUTOR	MICRO LAB	30.00	CO	M H	11
		PRESIDENT ELECT	STRAT SIMS	39.95	AP	M H	08
	HISTORY	LAW IN AMERICAN HISTORY	INTEL SOFT	45.00	AP	M H	16
		U.S. HISTORY DATABASES FOR PFS:FILE	SCHOLASTIC	99.95	AP	M H	16
		SANTA FE TRAIL	ED'L ACTV	59.95	AP	E M H	14
		RAILS WEST!	STRAT SIMS	39.95	AP	M H	11
	MISC.	DEMO-GRAPHICS	CONDUIT	85.00	AP	H	04
		SOCIAL STUDIES, VOLUME 2	MECC	41.00	AP	M H	08
		ELEMENTARY VOLUME 6: SOC. ST.	MECC	41.00	AP	E M	08

MICROSIFT INDEX KEY

In order to provide the maximum amount of information on the Index of MicroSIFT reviews, certain standard abbreviations have been used throughout. Below is a definition of each abbreviation used.

Ab.	SUBJECT
BE	Business Education
CG	Career Guidance
CS	Computer Science
FL	Foreign Language
HE	Home Economics
HL	Health
IT	Instructional Tool
LA	Language Arts
MA	Mathematics
MU	Music
PE	Physical Education
PR	Preschool
PS	Problem Solving
SC	Science
SS	Social Studies

Ab.	HARDWARE
AP	Apple
AT	Atari
CO	Commodore 64
PET	Commodore PET
IB	IBM
RS	Radio Shack
TI	Texas Instruments

Ab.	LEVEL
P	Primary k-3
E	Upper Elementary 4-6
M	Middle School 7-8
H	High School 9-12

Northwest Regional Educational Laboratory

300 S.W. Sixth Avenue • Portland, Oregon 97204 • (503) 248-6800
TELEX: 701716 CABLE: NWREL SOURCE: STLØ58

DATE: November 19, 1985

TO: All MicroSIFT Dissemination sites

FROM: Dave Weaver

SUBJECT: MicroSIFT Evaluations

I am writing this letter to bring you up to date on developments relating to the MicroSIFT Project.

November 30, 1985 marks the end of our current contract with the National Institute of Education which provides the funding for MicroSIFT Reviews. By that time, we will have completed and published set 16, the last set of reviews in the current form. Although NWREL has been awarded another five-year contract from the Department of Education, the publication of in-depth reviews of individual products is not included in that scope of work. The decision to discontinue the review activity was based on the following considerations:

1. The new definition of laboratories is to move toward greater regional services and less research and development, to provide more of their assistance through other agencies and professional organizations rather than directly to schools and districts, and to focus heavily on school improvement and educational policies. National efforts are expected to concentrate on collaboration with other regional laboratories.

2. It is becoming increasingly difficult to collect thorough, well-written courseware evaluations from volunteer reviewers. This delays the production and increases the total cost per review. We are unable to pay reviewers.

3. Reviewer turnover is very high and we are not able to provide retraining opportunities.

4. The number of reviews published (100 to 150 per year) is less than ten percent of the number of new products released. This level is inadequate for meeting the needs of educators.

5. Current trends in classroom use of microcomputers include an emphasis on tool type packages which cannot easily be evaluated using the existing MicroSIFT forms.

AN EQUAL OPPORTUNITY EMPLOYER

This action does not mark the end of the MicroSIFT Project, but simply the beginning of its next phase. Some of the activities which will be undertaken in the next two years includes:

1. Continued development of the RICE database. Our intent is to build the volume of the database by adding review data collected from states and other education agencies willing to share the data. We will also be re-examining ways to make the information more readily available to educators.

2. Publication of comparative evaluation reports of software packages of similar nature and analysis of software in specific categories. For example, we will be analyzing approximately 15 science interfacing packages to produce the first analytical report published under the new contract.

3. Collection and summarization of existing evaluation data into some format which is more useful to the decision maker. A major problem for practitioners is the overload of review information from numerous sources published in a variety of inconsistent formats.

4. Continuation of the Reports to Decision Makers series.

Previously published reviews (sets 4 through 16, including the LIBRA science reports) will be available from NWREL for $5.50 per set to anyone interested. Enclosed is an order form which you may copy and distribute.

Thank you for your efforts in making the reports from the first phase of the MicroSIFT project regularly reach some ninety thousand national educators. I look forward to working with you in our second phase of operation. We intend to send masters of the analysis reports in the same manner as the courseware reviews and will be in touch with you to verify your desire to receive them.

Enclosure

Grade Level and Subjects of Courseware Evaluation Reports

Set #4: 33 total (January 1983)		
Grade Level:	Elementary	5
	Secondary	16
	Both	12
Subjects:	Alphabet/Number Recognition	1
	Mathematics	15
	Physics	2
	Chemistry	1
	Energy/Economics	1
	Biology	1
	Language Arts	8
	Languages	1
	Social Studies	1
	Business Education	2
Set #5: 25 total (April 1983)		
Grade Level:	Elementary	18
	Secondary	1
	Both	6
Subjects:	Testing	1
	Mathematics	6
	Teacher Tool	3
	Language Arts	13
	Reading	1
	Music	1
Set #6: 27 total (May 1983)		
Grade Level:	Elementary	16
	Secondary	3
	Both	8
Subjects:	Language Arts	8
	Mathematics	10
	Computer Science	2
	Physical Science	1
	Chemistry	1
	Problem Solving	1
	Games	3
	Readiness Concepts	1
Set #7: 26 total (August 1983)		
Grade Level:	Elementary	11
	Secondary	3
	Both	12
Subjects:	Mathematics	13
	Language Arts	7
	Science	1
	Physics	1
	Geography	1
	Economics	1
	Social Studies	1
	Mathematics/Language Arts	1
Set #8: 28 total (December 1983)		
Grade Level:	Elementary	18
	Secondary	2
	Both	8
Subjects:	Language Arts	16
	Mathematics	4
	Computer Science	1
	Social Studies	4
	Social Studies/Science	1
	Vocational Education	1
	Business Education	1
Set #9: 30 total (February 1984)		
Grade Level:	Elementary	9
	Secondary	4
	Both	17
Subjects:	Language Arts	9
	Mathematics	5
	Language Arts/Mathematics	2
	Languages	5
	Science	2
	Science/Health	1
	Computer Science	2
	Problem Solving	1
	Social Studies	1
	Vocational Education	1
	Physical Education	1
Set #10: 24 total (May 1984)		
Grade Level:	Elementary	7
	Secondary	12
	Both	5
Subjects:	Language Arts	7
	Mathematics	14
	Computer Science/Art	1
	Business Education	1
	Science	1
Set #11: 37 total (August 1984)		
Grade Level:	Elementary	15
	Secondary	6
	Both	16
Subjects:	Language Arts	9
	Language Arts/ Special Education	1
	Reading	1
	Language Arts/Art	1
	Mathematics	10
	Computer Science	2
	Reading/Mathematics/Science	2
	Social Studies	2
	Business Education	2
	Music	1
	Problem Solving/Logic/ Electronics	1
	Science/Geography/ Physical Education/Arts	1
	School Readiness	1
	Teacher Tool	1
Set #12: 33 total (November 1984)		
Grade Level:	Elementary	5
	Secondary	12
	Both	16
Subjects:	Mathematics	9
	Business Education	2
	Health/Home Economics	2
	Math/Personal Finance/ Home Economics	2
	Mathematics/Vocational Education	1
	Science	8
	Language Arts	6
	Teacher Tool	3
Set #13: 26 total (June 1985)		
Grade Level:	Elementary	6
	Secondary	7
	Both	13
Subjects:	Language Arts	4
	Languages	9
	Social Studies	2
	Mathematics	6
	Mathematics/Art	1
	Mathematics/Science	1
	Science	1

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MicroSIFT Courseware Evaluation Reports

We are pleased that you are interested in the courseware evaluation work of the NWREL Computer Technology Program. The following sets of evaluation reports are available. Sets #1 through #3 are outdated and no longer available.

Order	Description (See reverse side for grade level and subjects of reviews in each set)	Cost
☐	Set #4—33 Courseware Reports, January 1983	$ 5.50
☐	Set #5—25 Courseware Reports, April 1983	$ 5.50
☐	Set #6—27 Courseware Reports, May 1983	$ 5.50
☐	Set #7—26 Courseware Reports, August 1983	$ 5.50
☐	Set #8—28 Courseware Reports, December 1983	$ 5.50
☐	Set #9—30 Courseware Reports, February 1984	$ 5.50
☐	Set #10—24 Courseware Reports, May 1984	$ 5.50
☐	Set #11—37 Courseware Reports, August 1984	$ 5.50
☐	Set #12—33 Courseware Reports, November 1984	$ 5.50
☐	Set #13—26 Courseware Reports, June 1985	$ 5.50
☐	All 10 Sets Above	$50.00
☐	Set of 99 Reports on Science Courseware, January 1985	$25.00
☐	Index of All Sets on Diskette (requires PFS: File for the Apple II)	$10.00
☐	Index of All Sets in Print	$ 2.00
	TOTAL (9920-8115)	$_____

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Institutional purchase orders accepted for amounts over $15